جامعة التقنية
والعلوم التطبيقية
University of Technology
and Applied Sciences

المصنعة
Al-Mussanah

Broadening Horizons

e-ACT 2022

OFFICIAL MAGAZINE OF UTAS - AL MUSSANAH

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Excerpts from the Speech of

His Majesty Sultan Haitham bin Tariq

"Youth are the wealth of a nation, its inexhaustible resource and the arms that build it. They are its present and future. We will always listen to them, and sense their needs, interests and aspirations which will definitely be accorded the attention that they deserve.

On top of our national priorities is the education sector, with all its types and levels. It will receive full attention, and it will be provided with the supporting environment which motivates research and innovation. We will also provide it with all means of empowerment, since it is the base upon which our children will be able to participate in meeting the requirements of the coming phase of development".

Over the years, I could proudly say that UTAS-Al Musannah has made remarkable progress in transforming to being an internationally competitive institution as will be showcased in the pages of this issue of our e-magazine.

The various initiatives, accomplishments, and achievements that you will see in this issue are marks of excellent work and University milestones that we wish to share with everyone. As we celebrate these victories, we continue our efforts to achieve overall distinction as we relentlessly strive for excellence in everything that we do at the University.

Notwithstanding the unexpected challenges we have faced this year as we have successfully overcome the effects of one of the worst global crises in history, our strong commitment to student success has never been more important than it is now. I am proud that UTAS-Al Musannah's staff and students are some of the most dedicated, result-focused, and motivated I have seen. True enough that when it comes to facing challenges and advancing initiatives and programs that will help our students achieve their goals, everyone in our community must work together for success.

This issue focuses on the many ways our institution is growing opportunities for our students to follow their academic passions.

Finally, I would like to acknowledge the team behind the success of this e-ACT. I cannot wait to see more of your future publications.

Thank you very much and enjoy reading.

Dr. Ahmed Ali Ahmed Al Shahri
UTAS-A Dean

Table of
Contents

Institutional Proficiency in UTAS-Al Mussanah
Educational Technology Center (ETC) Services

Since the invention of technology, institutions of learning have aimed to utilize it to enhance teaching, learning, student management, and faculty performance.

Different digital applications and new educational technologies have greatly benefited students to accelerate their learning, comprehend complex ideas, and develop their research and other learning skills. With technology, educators are able to customize their lessons, provide distance learning, collaborate with others, and improve their teachingmethods. As a result, higher institutions have greatly improved the quality of education, promoted innovation, reduced costs, and so on. In UTAS-Al Mussanah, we have uilized digital transformation to become more productive, efficient, and effective than we were in previous years. We have used different technologies and resources which include in-house software LMS,websites, eBooks, social media, and cloudsolutions to provide the latest and innovative ways ofteaching and learning.
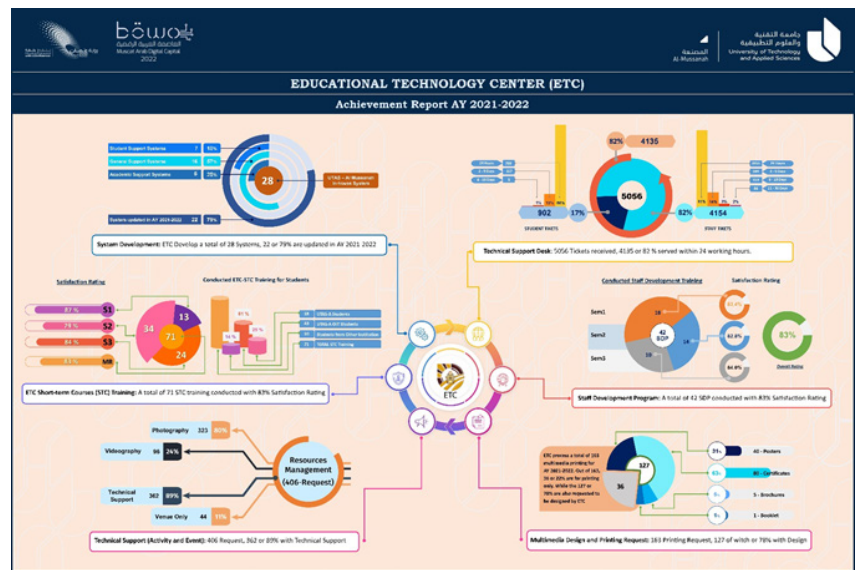
Students in UTAS-A have used the different in-house software and online sites thru ETIMAD which has enabled them to access their lessons/learning materials online, take their exams, conduct their research by using different research sites and eBooks, request technical support, register and attend training and explore other online technologies that can enhance their learning. As for the staff, online services provided by ETIMAD have greatly improved their way of delivering their lessons, providing interactive exams, developing their research potential, and other ways of improving their teaching.

The digital resources and technologies used in UTAS-A have been a great help, especially during the pandemic wherein staff and students have relied mostly on online resources for their teaching and learning. Though face-to-face learning was not possible at that time, technology has helped the University to provide undisrupted teaching and learning activities online.

As UTAS-A progresses in digital transformation, the University has also evolved and developed ways to be more proficient. The technologies that we have greatly enabled the staff to attain their desired objectives and key results which corresponds to institutional proficiency. New technologies and tools have opened ways for us to further develop different strategies and policies which have vastly improved the digital process of the University. Being at the forefront of this digital transformation, the Educational Technological Centre (ETC) is making sure that these new technologies and tools will always be available to all staff and students as we all strive to become one of the leading universities in Oman. As shown in the figure above, ETC continues to move forward with technological innovation for it to effectively provide the required services for each center and department at the University.

The Quality Assurance Department welcomed the academic year 2022-2023 with anticipation of new developments, challenges and opportunities. This anticipation stems from the University of Technology and Applied Science's (UTAS) new strategic plan 2022-2025.

The QAD will work closely with its centers and department's coordinators to ensure that the targets indicated in the strategic plan 2022-2025 are realized. To begin, a meeting was held at the beginning of the semester to discuss how each goal and indicator will be met annually.

Furthermore, the QAD has been performing a number of routine responsibilities for years. As a result, it is critical to update the current system and procedures to correspond with what the UTAS provides and expects from each branch.

It may be a challenging effort, but with the coordination of the QA members and good communication among them, we believe it is doable and achievable.

The UTAS-A's achievements for 2021–2022 are displayed in the graph below. The portal and QA Sharepoint both display the achievement report for the 2021–2022 strategic plan, which received a satisfactory rating.
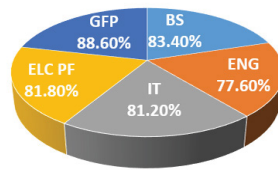

The branch achieved a success rate of 65.62%. (Goals 2 and 3 were fully achieved, while goal 1 received only 47.61%). Excellence in institutions is the focus of Goal 1, while academic excellence and collaboration with stakeholders are the subjects of Goals 2 and 3, respectively.

It is acknowledged that students are pleased with the teaching and learning they have received. A relatively high percentage (78% to 89%) of student respondents expressed satisfaction with the ELC and academic departments. The Branch Committee received very satisfactory work performance ratings ranging from 78% to 91%.

The QAD has consistently monitored the implementation of their action plan, and as a result, the committee is committed to fulfilling its responsibilities, as evidenced by the achievement results.
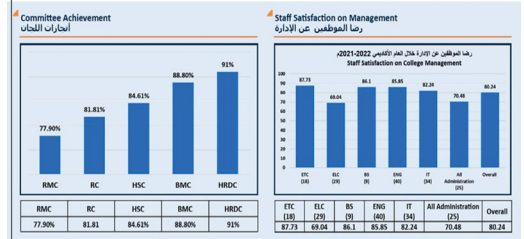
80.24% of the staff were satisfied with management, while 65.54% were satisfied with various services.The UTAS-A is constantly addressing the services that need to be improved. There is still room for improvement, which will occur after the new UTAS SP is implemented.
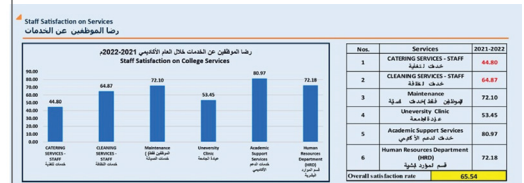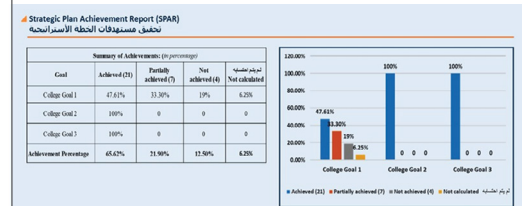
The Individual Performance Measurement System
(IPMS or EJADA)

The staff of UTAS-A along with other government sectors have started to apply the IPMS. A series of workshops led by Ms. Balqees Al Mandhari and Mr. Aatif Al Balushi from HRD and IPMS team of UTAS-A were conducted to ensure that staff are aware of the system. The main objective of IPMS is to find the appropriate tools and enablers to instil a culture of professionalism, improve performance appraisal systems, and link productivity with incentives. The IPMS recognizes employees' efforts and ensures that incentives and rewards are distributed fairly. It also allows staff to create a work plan, which is then discussed with the direct supervisor. Staff should clearly state his or her objectives in the plan. The key results demonstrate progress toward the objectives, which are measurable and attainable.

The weightage must also be distributed wisely and fairly, and the target span must be reasonable. Every year, the evaluation cycle is repeated. The direct supervisor reviews and approves staff plans, checks staff entries of actual performance on time, and discusses and provides feedback on actual achievement. For more details, refer to ejada website.

Through this column, the QAD would want to extend its gratitude to the former QAD Heads and QA coordinators for their contributions as well as a warm welcome to the current and newest members of the QA. If we all work together as a team, the branch will be successful in all of its endeavors.

Ms. Balqees Rashid Al-Mandhari
Quality Assurance Department - Head of Department

Dr. Malik Hamed Saif Al Zakwani
Assistant Dean for Admin & Financial Affairs

Administrative and Logistical Support

It gives me immense pleasure to convey my thoughts to the staff and students at the University of Technology and Applied Sciences-Al Mussanah (UTAS-A), through this edition of the e-magazine. UTAS-A has come a long way to grow from strength to strength to be what it is today with big developments in its infrastructure and facilities. Guided by the Oman Vision 2040 and driven by regional and global changes, the University has embarked on the process of Omanization in the field of higher education through the recruitment of several Omani lecturers and technicians. The staff appraisal process, EJADA, has been introduced to assess the efficiency of the staff and to motivate/reward the staff who are performing well. The Administration and Finance Department has chosen to increase the University's manpower and promote rapid digitization of services to cater to the needs of the staff and students. Maintenance of University facilities, improvement of landscaping, and upgrading of football ground pitch have been embarked upon in full stretch. The University has also planned to go ahead with the construction of a proposed building to accommodate staff offices and classrooms.

Further, the Health and Safety Committee continues to strive to create a safe and healthy environment for the University community apart from organizing awareness sessions and guest lectures by experts from other organizations. The Human Resources Development Committee is also relentlessly helping the academic staff by inculcating relevant knowledge in various subject areas and on general topics through staff development activities. The administration of UTAS-A is committed to fulfilling its vision of expanding further to contribute in a big way to nourishing the academic interests of staff and students and in making the campus ideal for everyone's academic growth and commendable educational experience. I congratulate the ETC, members of the e-magazine Editorial Board, writers, and all the staff and students from different departments and centers, who have contributed to the publication of this edition of the UTAS-A e-magazine.
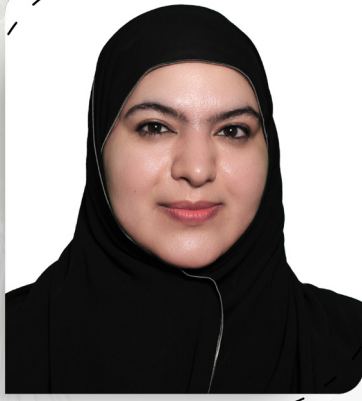
Ms. Zainab Mohammad Nabhan Al Ma`awali
Head of Center – Educational Technology Center

In the education sector, like the University of Technology and Applied Sciences (UTAS), broadening horizons play a critical role in the provision of proper teaching and learning experiences for its staff and students. By providing them with the latest technology and adopting advanced studies in their respective fields, the quality of instruction and learning experience will surely continue to improve. Benchmarking with other institutions and industries both local and international, also helps UTAS in broadening its horizons by sharing its best practice and adopting others' best practices that apply to UTAS. UTAS believes that broadening one's horizons is the key to having more chances and opportunities in life. As such, UTAS does not stop exploring more possibilities on how to contribute to develop the youth through teaching. This principle of broadening horizons is integrated into the UTAS Visual Identify Logo. Specifically, orange represents passion and creativity while the blue color is for confidence and leadership. UTAS believes that these traits are needed to broaden one's horizons. The UTAS Visual Identity Logo also promotes the following values: equipping the next generation to be locally and globally competitive in the field of technical and applied education; and, Staying ahead by building the proper skills for the future needs of the industry, and the diversity that opens prospects and increases the opportunities both locally and internationally. These values will prepare the University's stakeholders in broadening their horizons. Broadening horizons is also present in the UTAS Vision and Mission. UTAS's Vision is to be the "Leading in technological and applied education to contribute to the development of a sustainable and knowledge-based society". while its Mission is "To build competitive and innovative capabilities by providing a stimulating environment and effective engagement with the community and industry to promote excellence in learning, research, and innovation." In pursuit of excellence, one should broaden his/her horizons and see beyond the unknown, explore more, experience more, and learn more.

آفاق واسعة
Broad Horizons

University Vice Chancellor Visits UTAS – AL Mussanah

The Vice Chancellor of the University of Technology and Applied Sciences (UTAS), His Excellency Dr. Saeed bin Hamad Al-Rubaie, visited the university branch in Al-Musannah on Tuesday, December 20, 2022, to follow up on the progress of work, discuss the educational process, and review the latest developments, challenges, and solutions.

The visit began with a meeting of the Board of Directors of UTAS-A, chaired by His Excellency Dr. Saeed Al-Rubaie, and in the presence of the Deputy Vice Chancellor of UTAS-A, Dr. Ahmed Al-Shehri, the Assistant Dean for Administrative and Financial Affairs, the Assistant Dean for Academic Affairs, the Assistant Dean for Student Affairs, and the heads of departments and centers to discuss educational and service issues and the most prominent achievements of the branch.

Dr. Ahmed Al-Shehri, the Deputy Vice Chancellor of UTAS-A, gave a presentation in which he reviewed the facilities and services of the branch, the number of staff and accepted students, educational programs, the most important achievements of the branch, and the prizes won by students during the academic year 2021-2022. He mentioned that UTAS-A students competed in 17 various competitions, in which they achieved first and second place eight (8) times, and third place seven (7) times. Students also participated in twelve (12) workshops and several scientific conferences and seminars. Funded research was also reviewed during the presentation, as UTAS-A obtained funding from the Scientific Research Council in the amount of 160,330 OMR to finance 16 scientific research from 2018 to 2022.

His Excellency Dr. Saeed Al-Rubaie commended UTAS-A for taking a proactive step in employing technology in providing technical support services to all employees of UTAS-A. This was embodied through a technical robot provided by the Education Technology Center (ETC). ETC received 5056 requests for technical support from students and staff during the past academic year in addition to covering and supporting 406 educational, cultural, social, and other events and activities. ETC also reviewed around 71 short training courses in various technical programs and specializations provided for students at the University and its branches and students from other educational institutions.

After that, the University Vice Chancellor met with the Student Advisory Council, the link between students and the University and a major partner in decision-making. In the meeting, the Vice Chancellor listened to the requests and demands of the student leaders.

His Excellency emphasized the importance of innovation as a means of finding new solutions to the challenges facing society in all fields, as a pillar for achieving entrepreneurship and creating the future, and as being the most important element in achieving the strategic visions of the Sultanate.

This visit resulted in a number of notable announcements.

• His Excellency directed that the priority of competition in academic jobs should be for Omanis from the training and technical staff who have the qualifications, experience, and desire to engage in the academic teaching field.

• His Excellency affirmed the significant importance of the Omanization policy, and the continuation of the Omanization plan for academic, support, and technical jobs in all the University branches. He also urged for the training and empowerment of young Omani competencies and giving them employment opportunities and involvement in the educational field to provide

Also both parties discussed the most important student challenges to find appropriate solutions.

For the aim of supporting student projects and entrepreneurship, His Excellency Dr. Saeed Al-Rubaie paid a field visit to students' home projects as part of the Habata Market event organized by the Entrepreneurship and Innovation Unit in the branch. He emphasized the importance of enhancing awareness of the importance of entrepreneurship and establishing student companies and directing the students' interest to employ their knowledge, skills, and attitudes for integration, competition, and supporting the national economy.

During the visit, the participating students were asked about their activities and the extent of the effectiveness of such participation in achieving their goals.

The visit ended with the University Vice Chancellor attending the interview session with the Omani innovator, Sumaiya Al-Siyabi.

required skills and knowledge.

• The University of Technology and Applied Sciences - Al-Musannah is entitled to build buildings for the academic staff, student services, and classrooms, in addition to developing its infrastructure.

• His Excellency praised the level and efficiency of the technical systems and services provided and the digital transformation initiatives at UTAS-A.

His Excellency stressed the importance of scientific research, and the need to encourage researchers, employees, and students, to participate in various fields of research, and to cooperate with research, knowledge, and industrial centers in the Sultanate so that the University becomes a center for science and knowledge for all.

Events and Achievements Section

ENGINEERING STUDENTS
PARTICIPATE IN

OMAN SCIENCE FESTIVAL

Some engineering students under the supervision of Mrs. Mai Al Saadi participated in the Science Festival –Oman with the theme, "With Science, we meet again!" from October 10 to 15, 2022. The students presented some experiments to school students, visitors, and community members using an easy and effective way to stimulate creative thinking. The engineering students demonstrated various activities while encouraging everyone to understand the importance of science in life and urging them to innovate, create a positive attitude towards science, innovation and scientific research, and enhance their and others' skills to integrate into a knowledge-based economy.

My Experience at Oman Science Festival 2022

Ms. Nawar Habib Ali Al Balushi
UTAS-Al Mussanah Student

The Oman Science Festival 2022 was held at Oman Science and Exhibition Center from October 10 – October 15, 2022. Students from different schools, colleges, and universities participated in this festival. When I participated in Oman Science Festival 2022, I benefited a lot because I got to know and communicated with a large group of people from different colleges, and universities, and from different fields and disciplines. In addition, I received much knowledge and information from people of other disciplines who participated in this festival and benefited from their skills which enabled me to improve in my studies. I also benefited from this festival as it helped students like me to learn and realize the importance of innovation and scientific research.

It also gave me the opportunity to introduce students and visitors to the importance of mathematics and invent some games for them to help them gain experience and knowledge.

In addition, the festival gave me the chance to meet with researchers and specialists in the fields of science from inside and outside the Sultanate of Oman to discuss the most important innovations and new inventions and to exchange ideas and information. This festival motivated me to be more involved in innovation, develop my scientific sense and culture, and get support for my talents and skills in the field of science.

IT Students Participate in Oman Science Festival 2022

The Oman Science Festival 2022 is an annual event and is being participated in by various institutions from the government, military, civil institutions, private sectors, and basic and higher education institutions. This year, the Ministry of Education for Financial and Administrative Affairs, Sultanate of Oman, through the Undersecretary, Mr. Majid bin Said Al Bahri, organized the festival from 10th to 15th October 2022 with around 110 technical events.

This event offered diverse topics of interest and activities including scientific innovation, education, military services, mini zoos, playing stalls, and designing and printing 3D models using plastic. The University of Technology and Applied Sciences, Al Musannah (UTAS-A) was one of the most active delegations in this event headed by Dr. Ahmed Ali Ahmed Al Shahri, Dean, and Dr. Najiba Said Hamed Al Zadjali, HoD-IT as among the attendees.

The Information and Technology students from UTAS-A who participated all throughout the event were Ms. Isra Mohamed Said Al-Kendi, Ms. Mathail Salim Mohammed Al Shulaili, Ms. Mazoun Issa Mohammed Al-Baraidai, Ms. Nawar Habib Ali Albalushi, Mr. Alhusain Ali Salim Al Harthi, Mr. Hatem Khalid Nasser Ali Al-Maawali, Mr. Ahmed Khalid Al-Maawali, and Mr. Turki Faisal Abdulrahim Albalushi. The student participants were guided by their trainers, Dr. Dheva Rajan S. and Ms. Rana Tarrun Ansari in coordination with Ms. Mini Punnolli, HoS Maths, and Mr. Mohammad Khalfan Al Flaiti, HoS IT. Mr. Fahad Al Khamisi and Mr. Kulasekar Paneerselvam also played important roles in preparing and motivating the students for the presentation and providing technical support for the software preparation, respectively. The IT students and staff members are grateful to the University administration for its support and appreciation for the successful conduct of the Oman Science Festival.

Oman's 52ⁿᵈ National Day

Under the auspices of His Excellency, Sheikh Saleh bin Diab Al-Rubaie, Governor of Al-Rustaq, the University of Technology and Applied Sciences – Al Mussannah (UTAS-A) celebrated Oman's 52nd National Day. The ceremony that took place at the university auditorium started with the singing of the royal anthem followed by the presentation of the Okaz Poetry Group.

This group of students presented some traditional folk arts that characterize the Sultanate, such as Al-Azi and an enthusiastic band performance. The students of Al-Tharmad School for Basic Education presented a musical show about the love of Oman and the Sultan. Also, students of a theater group performed a national operetta entitled "Oman, the Eternal Shine" highlighting the role of the Sultanate in the maritime field and how Omanis were able to cross the seas and oceans. In this performance, the Omani sailors were portrayed of which Ahmed bin Majid is the most prominent.

The audience was also entertained by Badr Al-Sinani, a student who delivered a patriotic poem expressing his loyalty and love for the Sultan of the country. The Vocal Arts Group then presented some patriotic songs, which were accompanied by musical instruments. This was followed by the delivery of a paragraph of Watan Mimar, in which the student Yusra Al Hashami debated with Ms. Zahra Al-Awfiya, the winner of the Sultan Qaboos Award for Volunteer Work in 2017 who also received the Royal Commendation Medal from His Majesty, Sultan Haitham, may God protect him. Ms. Al-Awfiya shared her experience in volunteer work and the most prominent challenges she faced and how she was able to overcome them. After this, the student, Mays Al-Balushi presented another poem of patriotism in which she expressed her love for Oman and the Sultan. The students of the Student Advisory Council (SAC) also presented a theatrical sketch that included some patriotic messages about love for their homeland. This was followed by the honoring of the participants by the sponsor of the ceremony.

The sponsor of the ceremony was also briefed on the works of the students of the Arts Group, who reviewed their artworks, including paintings, manuscripts, and artifacts. After that, the sponsor of the ceremony visited the information technology community corner, which contained some of the students' technical work. His Excellency, the Sheikh also watched how to make pottery and Omani Halwa, and looked at the corner of palm fronds, traditional food, and the corner of wooden handicrafts. He also visited the corner of the national competitions and the corner of the Student Advisory Council and reviewed the most important tasks and work of the Council. After that, His Excellency, the Sheikh, was briefed on the exhibition of the Royal Air Force of Oman, which included the presentation of the models of warplanes and works of art. He also viewed a display of the Ministry of Heritage and Tourism and listened to a brief explanation of the most important works of the Ministry.

After that, His Excellency, Sheikh Saleh bin Diab Al-Rubaie, inaugurated the exhibition of the Friends of Light Group and this was followed by photo opportunities.

The National Day celebration was organized by the Department of Housing, Student Activities, and Graduation, with the participation of students in student groups and academic societies.

Among the participants who were recognized during the ceremony were those from the Royal Omani Air Force and the Ministry of Heritage and Tourism, Al Tharmad School for Basic Education, Diaa Al-Alam School for Basic Education, Saeed bin Mahrez Al-Nazwi School for Basic Education, Ms. Zahra Al-Awfiya, Mr. Wael Shehata Abdel-Maqsoud, and Mays Al-Balushi. After that, His Excellency, Sheikh Saleh, the sponsor of the ceremony, opened the activities in the green yard where the activities began with the saluting of the flag and patriotic shouts with the participation of the scout clan of the University and the cub scouts of Diaa Al-Alam School for Basic Education and the scouts of Saeed bin Mahrez Al-Nazwi School. The sponsor of the ceremony also toured the National Day event displays including some of the student entrepreneurial projects. Then, the sponsor of the ceremony and the guests were briefed about the "Corner of Oman through Time", which contained ancient manuscripts and books. The members of the Friends of the Library Group explained to the guests the historical eras in Oman. The students of the Ain Al-Khalil group also reviewed some of the books written by the group's members.

Technology Transfer Office Pushes
for Invention Commercialization

Innovation is the main driver of the knowledge economy. It introduces new ideas and solutions to contemporary challenges, new products and services to the market, and new ways to increase productivity. The major obstacle is converting the innovation system from a conceptual framework to a theory that supports the practical application. In doing that, innovation can be costly and risky. Hence, it is apparent that the Technology Transfer Office (TTO) plays a very vital role. The TTO in UTAS-Al Musannah is the bridge that links the university and the community. In line with Oman Vision 2040, the TTO believes in the importance of technology transfer where it encourages and supports scientific research and innovation centers as well as talent incubations. In light of creating awareness, the TTO conducted a series of five awareness workshops across all the departments in the university. A large number of attendees comprising technicians and lecturers were enlightened with information on the general concept and the specific tasks and objectives of the TTO.

For the promotion of research and innovation, the TTO has appointed seven examiners from the Information Technology Department, Business Studies Department, and Engineering Department who will assess the ideas presented by researchers and innovators.

The TTO has successfully played a role in the Entrepreneurship Exhibition which was conducted on 22 June 2022 in collaboration with the Business Department and the Entrepreneurship and Innovation Unit. The exhibition was a great platform where students had the opportunity to present their prototypes.All in all, the three-month-summer semester was eventful for TTO. Thus, for this current semester, the Office is planning to achieve its fullest potential by focusing on new approaches in conducting awareness activities that will encourage inventors and researchers to share their inventions and concepts with the Intellectual Property (IP) examiners and the TTO. Through this cooperation, the dream of invention commercialization is not far from becoming a reality.

HUAWEI ICT COMPETITION

The IT Department conducted Huawei ICT Competition 2022-23 on 18 October 2022. There were two (2) students who went to Muscat to write the Huawei National Level ICT Competition Exam on 21 November 2022. They are Sara Abdullah Darwish Albalushi and Alhusain Ali Salim Alharthi.

The ISACA Student Group (ISG) constantly works to promote education on a wider range by enabling students to network, share knowledge, and establish connections with a supportive community of professionals. The ISG at UTAS-Al Mussanah has been completely operational since it was established in June 2019. It runs competitions and professional development programs to give students the experience and information they need to be competitive after graduation.

The ISG group conducted the following online workshops:

(i) Cyber Pandemic
The Department of Information Technology, in association with the ISACA Student Group (ISG), organized an online workshop for Information Security Students on the topic "Cyber Pandemic". The workshop was held on 6th March 2022 through MS Teams from 7-9 PM.
The workshop was conducted by Dr. S. A. Amala Nirmal Doss, who is working as an Assistant professor in the Department of Computing, at Muscat College, Oman. The speaker delivered a very interesting topic with live examples and practical demonstrations. Dr. Doss advised students on tips to be cyber safe and raised awareness on a lot of current threats, tools, and trends.

(ii) Privacy by Design
A technical talk on the topic "IIOT AND INDUSTRY4.0: CYBERSECURITYCHALLENGE" was organized by the ISACA Student Group of the IT Department on 16th June 2022 through MS Teams. The speaker, Mr. Arul Selvan, engaged the staff and students with his exceptional technical proficiency along with an in-depth understanding of business operations.

(iii) "Harmonizing ISO27000ISO30401-A Knowledge Asset Risk Management Approach for Cybersecurity" 13 February 2022

(iv) IT Students Elect ISACA Student Group 2021-2022 Officers
The ISACA Student Group Office Bearers Nomination took place on 27 February 2022. The elected office bearers are listed below.

ISG President	Ms. Alya Khamis AlOwaisi 56j1619@act.edu.om
ISG Vice President	Ms. Rabia Abdulrahim Abdulsalam Albalushi 56s2125754@act.edu.om
ISG Treasurer	Mr. Alhusain Ali Alharthi 56s1874@act.edu.om
ISG Secretary	Ms. Ruaa salim ALSabib 56s1853@act.edu.om

Student Research Day
at UTAS-Al Mussanah

The Student Research Day was designed to promote student research and creative inquiry while providing a venue for presenting that work. This event was opened to undergraduate students from all the academic institutions across the Sultanate of Oman who want to display their research and creative projects from the IT discipline in the form of a poster/applied model with oral presentations. The Research Day was conducted on 10 November 2022. Several students from different colleges and universities displayed their projects and posters related to IT and engineering. Prizes and certificates were distributed to the three (3) best projects as well as posters.

IoT Workshop Conducted

Ms. Zahra Nasser Hashil Al Siyabi
Head of Section-NETWORKING

Session 1 of the workshop on IoT was conducted from 4-5 October 2022 from 12 PM to 2 PM at IT208. Real-time devices were used to provide hands-on experience to the students. At the end of the second day, certificates were provided to the organizer as well as the students. The Student Coordinator for this event was Ms. Zahra Al Siyabi and the student facilitators were:

Ms. Nawar Al Balushi

Ms. Israa Al Kindi

Ms. Shymaa Al Mawali

Ms. Anfal Al Badri

Session 2 The Internet of Things (IoT) helps people to live and work smarter, as well as to gain complete control over their lives. It also supports the development of smart devices for personal and industrial use. Distributed Database Management System is one of the main components of IoT cloud to store the data retrieved from the IoT devices. IoT is a foreseeable fast-growing technology that is used in sectors like manufacturing, agriculture, healthcare, transportation, media, retail, water and waste management, power distribution, etc. A series of IoT workshops have been conducted to create awareness among the students. IoT workshop session 1 was conducted for two (2) days on 4 and 5 November 2022 and session 2 was held on 13 December 2022. There were more than 130 students benefited from attending the workshops. A team of students conducted the workshop which was organized by MS. Zahra Nasser Al Siyabi, Head of Networking Section from the Department of IT. The student facilitators were Nawar Al Balushi, Isra Al Kindi, Shayma Al Mawali, and Anfal Suroor Al Badri. By attending the workshop, the students gained hands-on training about the IoT components and their usage as well as Wi-Fi communication between IoT devices. The main aim of the workshops is to promote the key knowledge of IoT and encourage the students to work more effectively in graduation and research projects. Students requested more workshops and were enthusiastic to attend similar upcoming sessions.

Dr. Najiba Said Hamed Al Zadjali
Head of Department-Information Technology

IT Students are in Seeds for the Future

Seeds for the Future is an international free training program that was made available to students from various universities and colleges by Huawei. This program was first launched in 2008 in Thailand to nurture young local ICT talents. Since then, 137 countries joined the program with participants from 500 top universities. It aimed to develop students' capabilities and improve their competencies, skills, and qualifications through the exchange of culture and technology among the countries participating in this program under the title of "Inspire the global talent to shape the future". This program supports the development of technology for the next generation of strategic leaders who will soon be benefitting from technology innovation and cross-cultural exchange with other countries.

The program offers the top selected students in the IT field an opportunity to study cutting-edge ICT technology at Huawei's headquarters and have hands-on practice in a cross-cultural environment. Thousands of students worldwide have received the training provided by Huawei through this program.

Three top-selected students from the IT Department of the University of Technology and Applied Sciences- Al Mussanah took part in the virtual 'Seeds for the Future' training program which ran for 8 days in August 2022. This training included discussions on the latest trends in digitalization and the use of technology in various domains.

The inauguration ceremony of the program took place at Omantel headquarters under the patronage of Her Excellency, Dr. Rahma bint Ibrahim Al Mahrouqi, Minister of Higher Education, Scientific Research and Innovation, in partnership with Omantel and Huawei, with the participation of 30 students from various universities and colleges.

The program was designed to transfer knowledge and experience via hands-on practice on the latest technologies: fifth generation, cloud computing, artificial intelligence, and the Internet of Things. It ended with a project competition named "Tech4Good" which was designed to cultivate young learners to discover new ways and assist them to explore digital technologies. A real-life perspective was given to the participating students coached by a Huawei expert followed by a series of workshops to fully develop the proposed idea of the students and bring them to reality. The "Tech4Good" was participated in by students from three countries: The Sultanate of Oman, Iraq, and the Kingdom of Saudi Arabia. By and large, the program boosted the student's creativity, helped them hone their entrepreneurship skills, and addressed common environmental and social issues they raised. Additionally, the activities the students had during the 'Seeds for the Future' helped frame their sense of social responsibility.

From Manual to Auto Registration – An arduous journey accomplished!

Technology continues to be a great enabler for the successful transformation of any manual process into either a semi-automated or fully automated one. However, there are many techno-managerial challenges in the design and implementation of any automation project. The General Foundation Program (GFP) of UTAS-A is no exception to this. Fortunately, the Department of Information Technology with the able and consistent support from the English Language Center, Registration Department, and GFP Registrars along with the University administration left no stone unturned in making the dream of automating the GFP processes into a reality with roaring success.

In the previous process, we had manually select the courses of study to be offered and match with the student timetables. This led to frustration for the students as they sometimes miss some critical classes during the first week of classes as the process takes time. Even the faculty members had to painstakingly check for timetable clashes based on the students' choices. Previously, changes were frequently made to the timetable of various faculty members. IT Department took the initiative of resolving these issues at the beginning of the semester to provide a unique, seamless, and systematic registration process for the students thereby ensuring a smooth entry into their program of study.

Auto registration was considered to be the most effective strategy to solve all these issues which is why every stakeholder came forward to actively participate in this automation process.

"The right first time, right every time" principle was followed in true letter and spirit and the automation process and tool were designed and developed. The benchmarking team was proactive in collecting and collating all data pertaining to the process with proper verification and validation by the relevant stakeholders. As a result, 97% of students completed their registration process successfully with minimal effort as soon as the auto-registration tool was rolled out.

Collaborative thinking and synergy among various participating departments paved the way for the success of yet another amazing milestone in our institution. We are grateful to all those who made this transition in the registration process a reality. We hope to reap more benefits in the days to come and enable our students to walk into their programs of study with ease and sufficient support.

Ms. Mini Punnolli
Head of Section-MATHS

UTAS-A Held First University Writers'
Forum and Book Fair

The University Library with the Library Student Committee organized the First Writers' Forum, which was held on 27-28 February 2022. This forum also coincided with the book exhibition of many exciting titles in various scientific and cultural fields. This event aimed to futher promote the idea of collaborative learning and writing that emanates from the corners of the library, to spread the spirit of thought and logic, and support writers and thinkers to move towards free writing in various fields. This event hoped to help in supporting the writers to improve in the various elements of writing to advance and spread the culture among the members of society. Among the most prominent recommendations made by the forum is the importance of establishing agroup specialized in the writing category. This group is called the "Eye" community, which is hoped to have a great impact in embracing students who possess a passion for writing and developing them in accordance with the capabilities of the University.

This will also help in contributing to the delivery of literary and intellectual productions to society which will revive the cultural movement throughout the University, as it is like acultural epic in which intellectual opinions, publications, and a conscious look at the various fields of creativity are exchanged. The forum was attended by different groups of audience including those from the University and a group of writers. The event was moderated by Dr. Khaled Al-Naseeh, a teacher of Arabic language in UTAS A, Ms. Halima Suleiman Al Balushi, the Head of the Library with a prominent writer, Mr. Muhammad Al-Muslimi, and a group of student authors who contributed an interesting dialogue about the reasons for writing, and the challenges they faced during and after writing. The forum highlighted these distinguished young writers and sought help from the University stakeholders to consider providing them with guidance and support so that they can be proud of their intellectual production in the university and across the nation.

Ms. Halima Sulaiman Al Balushi
Educational Technology Center-HOS-LSS

Library Student Committee Joined Azam

The Library Student Committee joined other committees during the Student Activities Days (Azam), which was held on 29-30 March 2022. The Committee members participated in three (3) activities.

The Omani Encyclopedia Competition: It aimed to enrich the minds of the participants and attendees with the treasures of this valuable encyclopedia.

Flying Books Exhibition: It is an exhibition for exchanging used books under the slogan "So that books do not perish". The aim of the exhibition was to ensure that the usefulness of a book does not stop with one person. The books can be exchanged and shared with others; hence, the name of this exhibition: Texts Without Dots. This event added a kind of fun and entertainment to everyone who participated and attended as paragraphs were presented to the contestants to write without dots. This method of writing is one of the primary methods practiced previously. The Student Committee's activities held during the two-day event allowed students and participants to interact, learn, and have fun.

Ms. Fatma Rashid Hareb Al Qasmi
Educational Technology Center-Librarian

Entrepreneurship and Innovation Department Achievement

The Department of Entrepreneurship and Innovation organized many events and activities during the academic year 2021-2022. Through this Department, student companies and projects won several awards in various competitions and events.

The UTAS-Al Musannah, represented by two student companies under the supervision of the Department of Entrepreneurship and Innovation participated in the Injaz Oman competition for student companies. One of these companies, Savnse Student Company reached the finals of the competition and was selected among the best three innovative products.

The student companies also participated in many exhibitions and innovative competitions. Plamore Student Company won second place and Ojaj Student Company won third place in the category of student companies in the Economic Vision Award on October 13, 2021. Plamore Student Company also participated in the Challenge and innovation Forum in the State of Qatar on November 10, 2021, and won the silver medal and third place in the competition. Student companies also participated in Al Araimi Boulevard Innovation Award from May 8 to 12, 2022, and won many awards. Plamore Student Company won the award for the best innovative product, Kenan Student Company won the award for the best engineering design, and Ojaj Student Company won the award for the best promising project. The Department also organized the "Al-Hatba Market" activity in Green Square for one month - one day every week.

The aim of this activity was to support student projects, display their products for sale, and give students the real entrepreneurial experience as true pioneers and business owners. This is the Department's way to provide motivation and support to students because the Department believes in the importance of marketing for student projects and urging them to continue working and progressing in various scientific and practical fields. "Al-Hatba Market" was organized on the 15th, 22nd, 28th, February, and 8th of March 2022.

In addition, the Department, in cooperation with Injaz Oman organized the Innovation Camp from 6 to 9 March 2022 with the aim of involving students across specializations at the University.

The Department, in cooperation with Injaz Oman and the Youth Center, also conducted a workshop titled "Be an Entrepreneur" from 22 to 26 May 2022 at the Common Classrooms Building.

The Department also initiated the signing of a memorandum of cooperation between the University and the Oman Chamber of Commerce and Industry (OCCI), Rustaq Branch on May 15, 2022, as part of the "Badir" initiative agreement to enhance joint support and cooperation between the university and OCCI. Under this cooperation, three sale points were established for students to display their projects and products for sale to support entrepreneurs and motivate them to give more at no charge. The sale points were distributed at the English Language Center, the Common Classrooms building, and the Business Studies Department building.

The Department, in cooperation with the Advisory Council, organized a workshop entitled "Making Successful Pioneers" which came within the Student Activities event (Resolve) on 29 March 2022.

The Department also organized a workshop on "How to Setup a Student Company" on 14 June 2022 for students who are planning to participate in the Injaz Oman competition and those interested in participating in projects and competitions.


The Department also conducted the training program called "Communication, Negotiation, and Persuasion Skills" at the Directorate General of Labor in Al Batinah South Governorate, Rustaq from 7 to 9 June 2022. Recently, the Department organized a workshop on "How to Market your Product within a Week without going Bankrupt" which was held on 12 October 2022.

Architectural Concepts Presented for CAS Students

A workshop on "Architectural Concepts" was organized on 04 October 2022 as part of the student academic activities and as an additional help for the students of architectural design courses of the Civil & Architecture Section (CAS) of the Engineering Department. The topics were presented by Ms. Zulfa Hamed Said Al Kharusi, a technician from the Civil and Architectural Engineering Section. She explained the fundamentals of a concept and how to develop an architectural concept. Ms. Al Kharushi also shared some easy-to-follow tips and techniques for creating architectural concepts with students.

Concepts are the driving forces behind every architectural project, as the concepts control and guide the entire project till it is completed. Architectural concepts are the backbone of the overall design. The concepts bring the design together by creating a cohesive story. Behind an architectural space, there is an idea (Concept) that is derived from the design principles in most cases. Developing the concept from sketch to a fully functional building, one which refers back to and connects with the initial ideas, is a challenge. Because of this, concepts for architectural projects need to be clear and understood by all members of the team so that they can inform and be reinforced at all stages of the project's development. A concept can be related to any aspect of the architectural design process. The architectural concept can be conveyed in both the macro and micro elements of a scheme design.
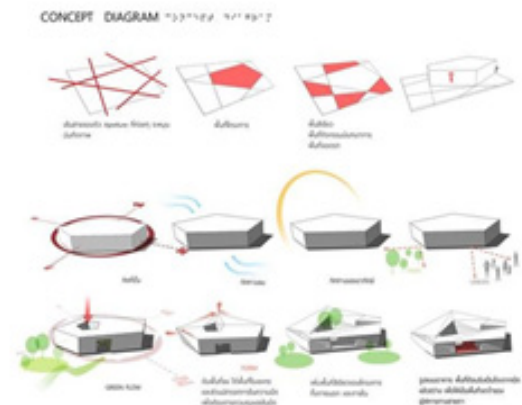
The architectural concepts may be derived from any form inspired by any natural or historical reference to the project. It may be derived from the site conditions and the cultural background of the site/project or it may simply be based on philosophy or principles like green buildings or sustainable buildings.

Ms. Zulfa Hamed Said Al Kharusi
C & A Engineering Technician

ME Held Symposium on Advancements in Mechanical Engineering

The Mechanical Engineering (ME) Section of the Department of Engineering at the University of Technology and Applied Sciences-Al Mussanah (UTAS-A) organized a symposium for student research paper presentations on 24th March 2022. The one-day event commenced with an inaugural session where Mr. Abdulhamid Hamdan Humaid Al Hinai, the Head of the Department welcomed the guests. Dr. Ahmed Ali Ahmed Al Shahri, Dean of UTAS-Al Mussanah also addressed the audience. The talk on "Roles and Opportunity of Mechanical Engineering in Oman and Abroad" was delivered by Dr. M. Ramaswamy, a technical expert from the Royal Court of Affairs, Oman. The event was participated in by members of various higher education institutions in the Sultanate of Oman and 25 research papers were presented in three (3) main themes: manufacturing, environment, and industrial challenges. Winners from the three (3) parallel sessions were given citations and prizes and all the other participants were also recognized. The symposium was organized and headed by the conveners: Dr. Naser Hamood Hamed Al Haddabi, Head of the Section, Mr. James Joseph, lecturer, and other staff of the Mechanical Engineering Section. The symposium helped enhance and showcase the research skills of engineering students in the Sultanate of Oman.

IEEE Organized ROBO FEST 2022

The IEEE Student Branch of UTAS-Al Musannah successfully organized the ROBOFEST2022, a national-level robotic challenge competition on 24th October 2022. The event is composed of four rounds as follows:

First Round: Self-Driving Robot on Road

Second Round: Waste Segregating Robot in Action

Third Round: Soldier Robot, The Protector

Fourth Round: Path Navigator on Search Mission

This event has shown the student's desire to gain knowledge and showcase their talents in the field of robotics and other engineering-related areas. The inaugural address was delivered by Dr. Nihad Al Zadjali, the Assistant Dean of Academic Affairs, UTAS- Al Mussanah. She briefed the audience about the milestones achieved by the IEEE Student Branch of UTAS-Al Musannah in the various competitions held across GCC.

Mr. Yahya Al Balushi, Membership Development Officer of the IEEE Oman Section is one of the delegates at this event. Mr. Al Balushi shared the ongoing IEEE activities in the Oman Section. About 50 student members participated in this competition which was judged by three (3) expert jury members from different universities/colleges who ensured a smooth, fair, and transparent evaluation. The following are the winners of the event:

First Prize Winners: UTAS –IBRA

Second Prize Winners: UTAS-Al Musannah

Best Design Award: UTAS-IBRA

All the winners were felicitated with prize money and certificates sponsored by IEEE Oman Section.

The IEEE Student Branch of UTAS-Al Musannah expressed their gratitude for the willingness of the IEEE Oman Section to provide this rare opportunity for them and it is hoped that the event met the standards framed by UTAS-Al Musannah and IEEE Oman Section.

آفـــاقٌ واسـعة
Broad Horizons

آفــاق واسعة
Broad Horizo

**UTAS
Identity**

Broadening Horizons

People normally do what is usual, convenient, and familiar. Everyone tends to only focus on what they know and repeatedly do for that is what they believe is effective and trusted. This may sound good in some respects but not normally the best in every situation. The world around us always keeps on evolving and what we know, what we used to do, and what we are familiar with may change or may be totally not applicable or needed anymore. Acknowledging that change may happen and preparing for the new things to come are keys for us to broaden our horizons and get better at what we do. It is important to be flexible and ready to adapt to the changes around us. We can broaden our horizons by simply learning from other people's perspectives and experiences. To broaden our horizons, we need to be open to doing and experiencing new things.

This his can done be by meeting other people from different cultures and learning from them, learning new technology, and trying other ways to do things. By doing these, your perspective will expand, and you will gain ideas and new strategies that will not only help you become a better person but a better professional too. As the famous saying goes 'No man is an island.' We will not be what we are without experiencing things around us; exchanging of ideas with others. We may be experts in one thing but we can also learn from others about other things. When we join forces with others, we can grow a small idea into a bigger one, and making this idea a reality becomes easier because we collaborate with others.

Broadening horizons also requires researching to have a wider understanding of topics and concepts that only once runs through our minds; we can also share this with others for them to be aware and adapt if required.

Another way to broaden our horizons is to leverage technology. Technology gives us much control to expand our vision to explore the world by using computers and smartphones. Technology also helps us to connect with other people or access data to learn and research many things to develop our knowledge and expertise. Evolving technology or digital transformation is also part of what affects the way we do things. Needless to say, this transformation will eventually broaden our horizons. The only thing is that we must be aware of these immerging technologies and not be afraid to adopt them if necessary and appropriate because one hindrance that holds us back from broadening our horizons is the fear of the unknown and failure.

The should give ourselves permission to try new things, explore options, and never stop learning.

Korean Language
and Culture Class

ELc Student Activities Committee organized an event called the "Korean Language and Culture Class", on Tuesday, 30 October 2022 from 12:00 PM to 01:00 PM at the Multipurpose Hall (CC 106). The workshop was presented by Ms. Kim Da He and Ms. Ha Pyonjo. The event was met with enthusiasm by students who learned the basics of the Korean language and some expressions of greeting, bidding farewell, thanking, and apologizing at a formal and informal level. The students also learned the letters of the Korean language and their equivalents in the Arabic language. Students participated in writing their names in the Korean language using the traditional writing brush. This event emphasized the role of the student activities committee in spreading cultures and contributing to the process of cultural communication between people. The event venue was decorated with some traditional Korean handicrafts that reflected the unique Korean culture. The attendees enjoyed the event and expressed their admiration for Korean culture and their desire to learn about other cultures around the world.

Up Close and Personal: Meeting a Poet and a Community Builder

In terms of literary interests, Mr. Musallami writes poetry. Even during his years in secondary school, he wrote eloquent poetry, published several press bulletins in local newspapers, and wrote free verses (dactyl).

Mr. Mohammad Al Musallami
UTAS-Al Mussanah Staff

He has one publication, a collection of poetry entitled, "I Don't Know Me", which he published in cooperation with the Omani Association of Writers and Literate. It contains eloquent Nabatean poems. As a poet and writer, he participated in the first poetry festival in Oman with an eloquent poem and a Nabatean poem. He also participated in Al Musannah Council for Poets in 2005. The event continued from 2005 to 2010, and it hosted several poetry events in the UTAS-A auditorium. Eventually, the idea was developed into Al Musannah Cultural Network. In terms of the cultural movement in the University, Mr. Al Muslimi mentioned that the founding of the Okaz Poetry Society was during the time of Mr. Hamad Al-Kharusi, may God have mercy on him. From this Society, well-known poets emerged from university students, such as Ali Al Mujaini and Ahmed Al Awfi who received several awards. Oman Poetry Festival was also hosted at the university, organized by the poet, Mr. Fahad Al Saadi, who used to invite poets from outside the Sultanate with approximately 40 poets in each session. Two (2) of these sessions were hosted in coordination with the Oman Poetry Festival.

Mr. Mohammad Al Musallami added that one of the most important cultural movements is cultivating the talents of students and providing them with adequate training as well as making poetic evenings for them to produce a poet or writer who enriches the field of poetry in the Sultanate in general. Mr. Al Musallami shared that among his upcoming works and plans is the announcement for the Okaz Poetry Competition in eloquent and Nabatean poetry at the beginning of November at the level of higher education institutions. He added that he is interested in volunteer work as well. He is currently the Chairman of the Board of Directors of the Oman Association for Disabled. This association was established in 1995 and it has two (2) branches in Sohar and Ibri. The association is concerned with movement disability. Mr. Al Musallami mentioned that UTAS-A is one of the first universities to do rehabilitation when there was a visit to document the needs of those with movement disabilities and the University was quick to respond. Mr. Al Musallami hopes to throw light on these people with disability to identify their needs, activities, and events. He also mentioned that there is cooperation between the association and the university in considering graduation projects, student activities, and research. He seeks to draft a memorandum of understanding between the university and the association. At the end of the interview, Mr. Mohammad expressed his thanks to Dr. Saeed Al-Rubaie, the Chairman of the University of Technology and Applied Sciences, for welcoming the idea of this proposed cooperation.

Company Info and Tips to Succeed
According to ONSOR CEO

Exploring and understanding the thought processes of every successful personality or company is truly inspiring. As such, in this article, we would like to share the highlights of our talk with Engr. Moadh Al Hinai, the CEO of Onsor Company. At the outset, Engr. Al Hinai thanked the University of Technology and Applied Sciences, Al Musannah for their faith in the company and for giving him the opportunity to share Onsor's experiences.

Engr. Moadh Al Hinai mentioned that Onsor Company was established in 2014, after which the commercial registration of the company was opened. This year marked the beginning of their journey. The Company started as a provider of engineering solutions such as designing smart boards used by teachers and other projects. After that, Onsor thought about the computer industry, and an agreement was signed with Intel Company. From there, the real launch of the company began. By the end of 2019 and part of 2020, the project was incubated by the Ministry, and then an agreement was signed with the ITHCA Company of the Oman Investment Authority.

Engr. Moadh Al Hinai also mentioned that a team of Omani youth has been created to work on engineering solutions such as artificial intelligence and the Internet of Things. Onsor Company has signed several agreements with ASYAD and Oman Broadband and others, all of which depend on Onsor Company solutions for the Internet of Things and artificial intelligence.Onsor Company won second place among all Microsoft partners in creating modern devices or what is known as laptops. Engr. Al Hinai pointed out that Onsor Company does not think of competing with the large leading companies in the market, but it strives to be distinguished through manufacturing devices that are appropriate and suitable for the use of children and school students.

Engr. Moadh Al Hinai
ONSOR-CEO

For instance, Onsor Company manufactured a book device designed to be protected if it falls. It was also designed in an interactive way containing several indicators on the logo from the back including the battery indicator and the wireless network indicator (Wi-Fi). In the corporate sector, Engr. Al Hinai mentioned that Onsor is the first local partner of Microsoft to get a Secured Core PCs Certificate. This means that their hardware level cannot be accessed and has a protection system that preserves all sensitive information in the event of a breach.

He also insisted that at Onsor, they focus on post-purchase services. Additionally, he pointed out that anyone who has the desire to purchase Onsor devices can go directly to the company and inquire about the type of devices that fit the programs that he/she needs so that he/she can purchase the appropriate device accordingly.

As a matter of community partnership between society and institutions of higher education, Engr. Moadh Al Hinai mentioned that Onsor Company can provide suitable offers and special discounts for students as well as provide additional guarantees and free programs for them.On a different note, Engr. Moadh Al Hinai advised every young man and woman who has a creative idea and wants to achieve it. He advised that it is necessary to believe that every idea bears success and failure, so we must work on the ideas that we believe in and strive to achieve them even if failures occur repeatedly because failure develops thoughts and leads us to success. He added that students must proceed on their path bearing in mind that failure and success are possible at every step. He also shared that it is necessary to endure difficulties and challenges to reach one's goals. He also emphasized that students should surround themselves with people better than them to help them develop and succeed and to get other perspectives that they may overlook.

How Did Technology Facilitate University Learning: Understanding Student Perspectives

From my point of view, technology has facilitated many things for us, such as making students' communication with teachers and colleagues easier through many online programs like "Microsoft Teams". This communication platform is very effective because we can watch classroom lessons many times. We also have the "Etimad" platform which contains all information related to students, such as the number of absences and the assignments required from students.

Mr. Mahdi Ibrahim Al Ajmi
UTAS-Al Mussanah Student

Education technology is a great way to apply different methods of lesson delivery to students. The use of digital technology in the classroom has provided the opportunity for new types of media to appear that were not available before. Technology has the unique ability to enable direct collaboration between us, students, to complete tasks or projects and share information with peers faster than ever before. The same tools that allow students to engage with their peers can also be used to share opinions with teachers. The expression of these opinions can be in the form of questions, answers, or suggestions to improve the method of teaching and learning. From this perspective, digital technology has increasingly become more linked to our daily life. Students now do not only need to learn how to deal with traditional technology but they are also obliged to learn new and non-traditional technology because this will be an essential part of our success in the future.

Mr. Abdulmalik Khalfan Al Salti
UTAS-Al Mussanah Student

The great growling engine of change is technology according to Alvin Toffler. We all know the services provided by technology in our lives in general, but I will summarize here the technology used in the process of facilitating our learning experience at the university. The University has provided some online programs to facilitate the learning process including e-mail, the college website, and Microsoft Teams. As a student, I use the college website effectively to know the dates of registration for our subjects. The e-mail has also been very useful to me in communicating with teachers, as well as in distributing any questionnaires easily. I used Microsoft Teams for group discussions and is very useful as it also contains some books and models that facilitate the learning process. All of them are beneficial for us in our university studies.

Mr. Saeed Salem Al Rahbi
UTAS-Al Mussanah Student

Auto Advisement Proposed

Dr. Ghouse Mohiyaddin Sharif G.M, Department of Business Studies,

Dr. Anooj Padmakumari Kunjunni Nair, Department of IT,

Ms. Jayashree Rajendran, Department of Business Studies.

The article titled "Auto Advisement" was published in a reputed journal called the "International Journal of Engineering Research & Technology (IJERT)" with ISSN No: 2278-0181, Vol. 11 Issue 04, in April 2022. The article emphasized developing a system to automate the process of academic advisement. The study reveals that academic advising is an important component that affects student progression in an academic setup, particularly in higher educational scenarios, where students are free to choose a course from a list of courses within a certain specialization.

Academic advisement is a key process in universities at the beginning of every semester. Each semester, it is a major and primary part of the academic activities to select the courses for individual students according to their marks scored in the previous semester, and their remaining courses according to the degree audit. In addition, the selection of courses would also include considering any courses students dropped or have been debarred from and finally their probation status.

The process is quite tedious for the advisors to keep track of the courses of their advisees and advise them accordingly. An automated academic advisement system could help ease the process and promote systematic advisement. This method is advantageous over the traditional one as it naturally reduces the burden of the advisors.

Thus, the study focuses on developing a system to automate the process of academic advisement so that advisors can be relieved from providing information required for creating next semester's academic requirements in timetabling for example. This will potentially lessen the manual requirement of academic advisement.

Students' Research Papers Presentation

SITREX (Student IT Research Exposition) organized by UTAS-Shinas had submissions of student research full paper presentations under the supervision of Dr. Rachappa Jopate and Dr. D. Gnana Rajesh. A few of them are listed below.

An IoT Based Intelligent Security System Implementation for Home Automation

• Ms. Zamzam Juma Mubarak Thani Al-Noufali
• Ms. Jawaher Mohammed Saud Al Malki.

Abstract:
Nowadays technology governed home automation makes life more convenient and can also lead to bigger safety with the Internet of Things (IoT) devices such as security cameras and systems

The CCTVs: Their Role in Keeping Houses Safe

• Mr. Musab Saif Said Saleel Al Abri
• Mr. Murshid Qasim Mohammed Al-Maawali

Abstract:
In this paper, one of the techniques used to solve one of the most important problems that many people complain about is presented. It describes how these cameras work and the main goal of installing them between homes and working places.

An Analysis of the Remedial Action Taken by IT Department to Support the Students at Risk to Complete Their University Studies

• Ms. Aya Said Khalfan Al Leibi
• Ms. Lamar Salim Abdallah Al Amri
• Ms. Yumna AbdulKarim Abdallah Al Balushi

Abstract:
After completing the research and investigation, it was noticed that a large percentage of students did not complete the requirements of the study compared to the number of students who completed their studies and graduated with a bachelor's degree. In this study, the researchers seek to find a solution to this widespread phenomenon and exams, as well as not issuing strict laws that harm the interests of the student.

Effect of Verbal Bullying on Students' Mental Health with Special Reference to UTAS-A

• Ms. Layali Rashid Humaid Salim Al Salhi
• Ms. Nada Yusuf Khalfan Al Qutaiti

Abstract:
A sample from all levels in the departments: Information Technology Department, Business Studies Department, Engineering Department, and English Language Canter (10% for each section) was taken and a set of questions were prepared well to try to gather information that is useful to achieve the purpose of the research. Questions about UTAS verbal bullying were raised to know the impact of this phenomenon. Finding solutions to this phenomenon and ways to raise awareness about it was the objective of this study.

Feature Articles Section

- Education
- Health
- Technology
- Personality

Future-Proofing Teaching for the
Evolving Educational Landscape

Dr. Annie Bangtegan Domede
English Language Center-Lecturer

The changes in the educational landscape are highlighted now more than ever due to the impact of the global shift from traditional classroom teaching to virtual instruction because of the pandemic. While most parts of the world have gone back to face-to-face teaching, some remained online or are delivering instruction through a blended approach. Regardless of whether learning institutions have gone back to teaching in a physical classroom or are still online or maybe utilizing a combination of online and in-person teaching, there is no denying that the world of education has changed and will continue to evolve with time. Now, the question is, what then is expected from educators in this dynamic realm of teaching?

As the front-runners in teaching and learning, educators are primarily expected to gear up and future-proof their teaching as they always do to meet the demands of their evolving profession and provide their students with the necessary knowledge and skills that they need to be future-ready. According to Kirschner as cited by Bennet (2019) in his article, "Future-Proof Learning: What if… 21st Century Skills Don't Exist?", published in the EDUCHATTER, future-proof education is about evidence-informed practice in teaching. He further explained that the focus is to help students to acquire knowledge and develop skills and attitudes necessary for them to learn in a 'stable and enduring way in a rapidly changing world'. In other words, future-proof teaching is enabling students to effectively learn regardless of whatever changes in the mode of instruction and other similar developments in the field of education that they may encounter in the course of their study.

Navigating the road to future-proofing teaching is not complicated. However, it requires personal dedication and honest self-evaluation. In times like this where the talk is usually about technology-based instruction, AI, big data, IoT, and the like, educators are of course expected to not only be aware of all this stuff but are also skilled enough to integrate them into their teaching. While this is part of the educational evolution that educators have to actively participate in, educators are reminded that future-proofing teaching goes beyond technology integration into classroom teaching. This is to say that future-proofing teaching is not just about technology or apps; it is still about understanding students' learning needs and responding to these requirements through a targeted, efficient, and appropriate method that could include technology-aided instruction. While the modes of instruction change, the primary aim of teaching remains.

Up until today, the concern of education is to impart knowledge to students and train them to develop the necessary and appropriate skills and attributes for them to reach their maximum potential, succeed in whatever area of specialization they wish to pursue, and thrive in life. Careful lesson planning and strategic and responsive delivery of the same with the aid of a technological tool that best matches the lesson and students' learning requirements then should be given equal weight in the teaching equation even during this time of endless technological development. Future-proofing teaching may not be a walk in the park, but it is not also a tough grind. For one, educators have to continue to engage in professional development activities. They must ensure to up their game and stay relevant by dedicating sufficient and quality time for capacity building. It is important to note that educators are preparing students for the future which means that their methods of teaching need to be in sync with that future and not stay hinged with outdated philosophies and/or pedagogical dogmatism. Educators have to commit themselves to continuous learning, unlearning, and relearning regardless of how learned they think they are. It is a crime for educators to stop broadening their horizons and upskilling themselves just because they feel that they are experts in their field or that they have been teaching a particular course for years. Educators by default should be pursuers of knowledge and builders of their skills to be able to competently do their job and produce future-ready professionals. Finally, educators have to continue to conduct self-assessments and identify their areas for improvement to allow for more focused and meaningful capacity-building undertakings.

Changes in the field of education will continue to take place, but this is not a problem for educators who are prepared and capable of utilizing all these changes and developments to their teaching advantage.

Classroom Dynamics and the Gen Z

Ms. Sahana Roshan
Information Technology-Lecturer

As university faculty, we teach our classes with our expertise in an academic discipline, and we prepare lesson plans by focusing on content. It's puzzling when our students do poorly on tests or assignments and tell us that they don't understand ideas that we've covered several times in class. When confronted by these behaviors, we tend to blame our students, citing their immaturity, their lack of dedication to the demands of the program, or their insufficient academic preparedness.

The straightforward response is that it's everything outside of our area of academic competence. Students' actions, feelings, and creativity are included, as well as teachers' actions and their emotions, teachers' ways of presentation of academic materials, student-teacher interactions, etc.Faculty and students enter the classroom with expectations and norms that have been cultivated by the communities and cultures from which we come. We all do things in class that may not directly relate to learning but are rather focused on the group's social dynamics, including control habits and handling conflict. It takes a lot of instructional time to manage the dynamics in the classroom.

Nevertheless, we can identify certain features and characterize useful classroom dynamics across most, if not all contexts – even if these are represented by different behaviors according to the setting.

When people are aware of what they share, they are much more likely to come together. As faculty, we can foster this awareness with activities that identify such commonalities, and then use them to enhance learning. A class that allows its students to communicate with one another in a variety of ways is likely to have a more inclusive, and therefore participative climate. This is because successful group activities involve members compromising to support each other.

An inclusive approach is important for the following reasons: the collaborative abilities and mindsets that we encourage in our students are among those most frequently demanded by today's emotions and a supportive, warm atmosphere helps students take the risks they need to learn.

There is no "one size fits all" in teaching, but classroom dynamics is a product of its context as defined both internally with the uniqueness of its members, as well as outside in the societal and institutional cultural contexts.

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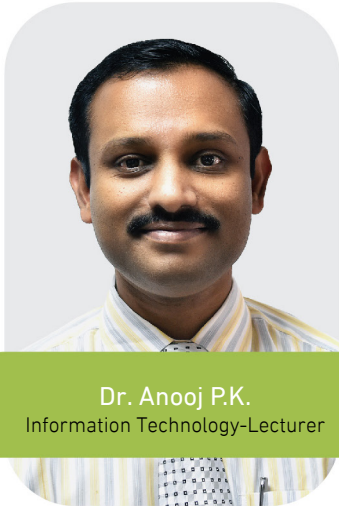
Flames of Success

Dr. Anooj P.K.
Information Technology–Lecturer

Do we all get appreciated for everything we do? Most of what we do may not even be known to those who are close to us. But still, we keep on going, keep on doing the things we do with a sense of purpose, knowing fully well that success succeeds those who are not after it. Some lucky people succeed because they are ordained to, but most people succeed by self-determination.

The key to success depends on how you feel about what you are doing and not on the task you deliver. The people at the top did not fall into their position accidentally. They have the will to do whatever is required of them by the situations they are in, managing the ups and downs, pursuing what they really wanted, and staying focused until they really accomplish something. Success is not by birth; it is a product of your meticulous perseverance. Success begins with a good feeling about where we are at present and a positive attitude about where we want to be in the future.

Most of us want to be recognized by others, caressed on the back, and rewarded for what we do. It may not happen to everyone; however, it does not mean that what we do is not worthy of appreciation. We are all equal in the eyes of the Almighty and we are all provided with the ability to do something worth recognition. We need to do our best in pursuit of our inner fulfillment rather than expecting rewards or recognition. When someone else benefits from what you do, that is recognition.

Some of us will plant the seed and will never see the plant. Some of us will harvest the crop without knowing who sowed the seed. Some of us will eat food by paying others to prepare it. The one who eats food never understands who contributed to it but the process is complete when the food reaches our plate. Everyone who participated in this process is successful in their respective endeavors. All that one needs to do is just do his/her part; he/she is rewarded when others do theirs.

Great people rarely think of themselves as doing anything other than the ordinary when what they do is quite extraordinary!

What is Success?

To laugh often and much

To win the respect of intelligent people

And the affection of children.

To earn the appreciation of honest critics,

And endure the betrayal of false friends.

To appreciate beauty,

To find the best in others,

To leave the world a bit better, whether by

a healthy child, a garden patch

or a redeemed social condition.

To know every one life has breathed

easier because you have lived.

This is to have succeeded.

University Social Responsibility for a Sustainable Tomorrow

Ms. Jeannette Ong Ee-Lyn
Business Studies-Lecturer

Univesities are where knowledge is being generated and shared; hence, they have a very vital role in ensuring that their students, as future experts, are given the relevant education and support they require to solve problems in ensuring a sustainable tomorrow. University social responsibility is the approach where the university integrates the aspects of social responsibilities into the everyday institutional management processes. By becoming universities that value social responsibilities, they can lead by example in encouraging and assisting students to be socially conscious people. Academic staff can give back to their local communities whilst using their capacity and dedication to support students in their endeavors. Students today belong to Generation Z, the so-called digital natives. They are the most connected people across the universe and information is abundant at their fingertips. They are knowledgeable about global concerns and have a thorough comprehension of how those issues influence individuals across the world. With that comes their desire to make a positive difference and be part of the ecosystem, and it is important that universities progress with this style of thought.

Universities can be committed to embarking on practical avenues to ensure their role in social responsibility. As education is said to be the key to socially responsible students, social responsibility and sustainability should be fully incorporated into the universities' curriculum to prepare students to make ethical and environmentally conscious decisions. This will help students become socially responsible educated citizens. Another way to promote social responsibility among students is to encourage altruism among them through the student council by organizing fundraisers, volunteer opportunities, and community service projects. Universities should ensure that their strategies and policies are intertwined with social responsibility values and should establish a continuous effort around campus. Universities can also level up into the global arena in sustaining social responsibility efforts by funding international disaster aids and supporting scientific efforts through research.

Universities as education institutions should normalize the habit of social responsibility efforts around the campus as it has a ripple effect where every sustainable practice leads to a positive impact in the world.

Ms. Fatma Rashid Hareb Al Qasmi
Educational Technology Center-Librarian

Dr. Vanitha Mahadevan
Electrical and Electronics Engineering-Lecturer

ETC Held Workshop on
First Aid in the Workplace

The Health and Safety Sub-committee at the Education Technologies Center (ETC), headed by Ms. Fatima Rashid Al Qasmi, organized a training on first aid in the work environment on 20 February 2022 to promote awareness on first aid and its importance in the academic environment.

The workshop was presented by Ms. Ghazlan Al Balushi, a member of the Omani Nursing Association and a certified trainer for first aid and resuscitation/critical emergency care. In the workshop, the possible accidents the staff may face in their work environments such as snake and scorpion bites, burns, electrical injuries, amputations, low/high blood sugar, and low/high blood pressure were discussed. The Do's and Don'ts on how to proficiently handle situations by doing the proper procedures in applying first aid treatment to patient/s before transporting them to the hospital for medical care were also covered.

The core of the discussion was on proper first aid methods for each injury. Moreover, the workshop encouraged interaction between the trainer and the audience and tackled wrong habits and practices based on some beliefs that contradict professional medical practices.

At the end of the workshop, the trainer was honored by Dr. Malik Zakwani, Assistant Dean for Admin and Financial Affairs and Chairman of the Health and Safety Committee.

Tips for Work-life Balance

Everyone needs to strike the right kind of mental as well as physical balance to develop a "you work while you work and play while you play" kind of life management. This will enable us to take our physical as well as mental health in the right direction to ensure that we are healthy and always ready to face any challenges. One of the practices or rather tips which would help ascertain the above idea is to take breaks between our work. Take a sticky note and write your entire plan for that respective day. Do not procrastinate on the plan; rather, complete it on the same day and of course, take a time off. An important thing which is needed to be mentioned here is to eat healthy food and eat on time. Do not compromise personal health over your job. The job can wait, so go for a food break. Do some simple mind/physical exercises to keep fit. Don't feel proud that you are a workaholic! This is not an option; this is recommended to anyone. Have some time for hobbies to detoxify your brain and keep it fresh and healthy. The office doesn't stop; it needs somebody at all times, so don't accept everything to overburden yourself and get stressed. Sometimes, you have to learn to say "No". Today, social media and other platforms build relationships, so invest in them to have healthy discussions and exchange knowledge to keep your mind healthy. Be happy and also make/keep others happy. Last but not least, love your day. The day will take good care of you. Cheers!

Preparing for an Exam:
What Students Need to Do

Ms. Jayashree Rajendran
Business Studies-Lecturer

Any human's health is a valuable asset. We spend the majority of our time in the modern "E" world with electronic devices of various angles, shapes, and applications. Although digital transformation has made people's lives easier, it has also made them lazy, as evidenced by unhealthy eating habits, unsanitary habits, and irregular exercise. According to research, the use of gadgets will reduce an individual's memorizing power and create more distractions from their studies. As exams are fast approaching, it is critical to understand relevant strategies in order to prepare for the exams without stress. Students should not panic and jeopardize their health by sleeping late and eating poorly during the exam period. These unhealthy practices cause anxiety in the minds of students due to exam stress, which may result in an unpleasant situation. Here are a few strategies for students to prepare for the exam with a calm and relaxed mind and achieve their desired level of performance in academic examinations.

1)   Set attainable goals and consistently work towards them much earlier than studying during the nearest day of the exam.

2)   Prioritize work and plan accordingly - allotting specific time for each subject and academic activity.

3)   Organize and arrange the study area so that there is enough light and fresh air to improve students' ability to concentrate and think clearly.

4)   Do regular and appropriate exercise, such as walking, aerobics, or meditation to keep both the mind and the body relaxed. This helps students keep their minds clear and focused.

5)   Practice proper and healthy eating habits to boost immunity and support brain development and keep it healthy.

Students could study for 20 minutes and then take a 10-minute break to allow their minds to process and store what they have learned. In doing this, the mind is reenergized and less stressed. Listening to good music can also help instill newness in the minds. To relax the brain and prepare for the next task, the music should be soothing and pleasant. Adequate sleep of up to 7 hours is also required to keep the mind healthy and relaxed.

Students who want to improve their academic performance and avoid getting stressed out due to exam preparations may want to consider these suggested healthy habits.

Understanding Big Data

Mr. Krishan Chand Sharma
Educational Technology Center-Technician

Big Data is a collection of data that is huge in volume. It is a large and complex data that none of the traditional data management tools can store it or process it efficiently. Consider that in a single minute, there are:
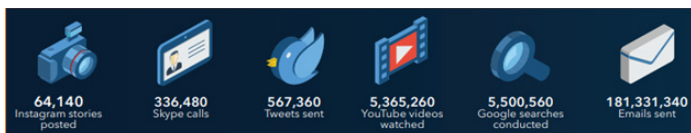

64,140 Instagram stories posted   336,480 Skype calls   567,360 Tweets sent   5,365,260 YouTube videos watched   5,500,560 Google searches conducted   181,331,340 Emails sent

Figure 1: Data Volume from Different Resources to Store in Database

Table 1. Types of Big Data

Properties	Structured Data	Semi-structured Data	Unstructured Data
Technology	Based on relational database	Based on XML/RDF	Based on binary data
Transactions	Matured transaction	Unmatured transaction	Unmanaged transaction
Flexibility	Schema dependent and less flexible	More flexible than structured data but less flexible than unstructured data	More flexible and there is the absence of a schema
Scalability	Difficult to scale DB schema	Scaling is simpler than structured data	More scalable
Robustness	Very robust	New technology, not very spread	—
Performance	Structured queries allow complex joining	Queries over anonymous nodes are possible	Only textual queries are possible

What is New in Big Data?
Volume is just one of the Six "V" of Big Data that organizations need to address. The main characteristics are specified by the 3V: (Volume, Variety & Velocity), and over time, other 3Vs (Veracity, Value & Variability) have been added to descriptions for big data.

Table 2. Six Volume(V) of Big Data

VOLUME	VARIETY	VELOCITY	VERACITY	VALUE	VARIABILITY
The amount of data from myriad sources.	The types of data: structured, semi-structured, unstructured.	The speed at which big data is generated.	The degree to which big data can be trusted.	The business value of the data collected.	The ways in which the big data can be used and formatted.

What are the Major Trends in Big Data?

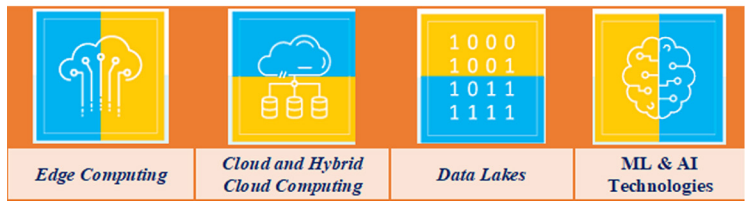Edge Computing   Cloud and Hybrid Cloud Computing   Data Lakes   ML & AI Technologies

Figure 2. Big Data Trends

How does Big Data Analytics work?
Getting started involves five key actions as Collection of Data, Integration of Data, Processing of Data based on Extract, Transform, and Load process, Analysis of Data, and finally performing an Intelligent-data Driven decision based on the pieces of evidence.

Set a big data strategy.   Identify big data sources.   Access, manage and store data via automated data pipelines.   Analyze big data.   Make data-driven decisions.

Figure 3. Big Data Analytics Working

Most Trending Big Data Technologies
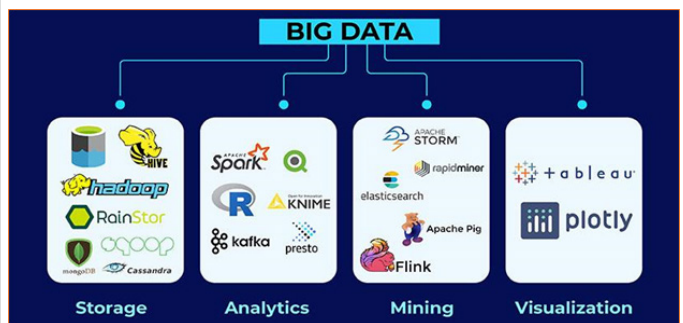

Storage   Analytics   Mining   Visualization

Figure 4. Big Data Technologies and Techniques to Store, Analyze, Mine & Visualize Popular Big Data Tools in the Market.
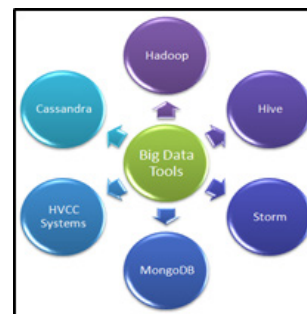
Popular Big Data Tools in the Market

Figure 5. Big Data Tools for Analysis

Benefits of Big Data	Challenges in Big Data
❖ Smarter recommendations	❖ Uncertainty of Data Landscape
❖ More insightful market intelligence	❖ Integrating data from a variety of sources
❖ Agile supply chain management	❖ Confusion with Big Data tool selection
❖ Better Customer insight	❖ The Big Data Talent Gap
❖ Data-driven Innovation	❖ Data growth issues
❖ Improved Operations	❖ Securing Data

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ShapeComputer Specs: Everything you need to know about this insanely fast-changing technology

Mr. Ajay Kumar
Educational Technology Center-Technician

About the Processor: In many cases, hardware devices are incapable to handle the processing speed because we are still using electron-based technology for processor/CPU. Most of the companies are trying to search for competent-based algorithms for revolutionary changes in speed. Unfortunately, we didn't get big and revolutionary success in this field to complete the challenges. If computer industries accept the concept of CPU that communicates using light instead of electrons, then we will have an unexpected miracle. The breakthrough, type of CPU has come out after efforts of the researchers from three US universities.

| Specs of the photonic-electronic chip	
Die Size	3mm x 6mm
Manufacturing process	45nm
Transistor Count	70 millionů
Photonic Components Count	850
CPU Cores	2
Maximum CPU frequency	1.65 GHz
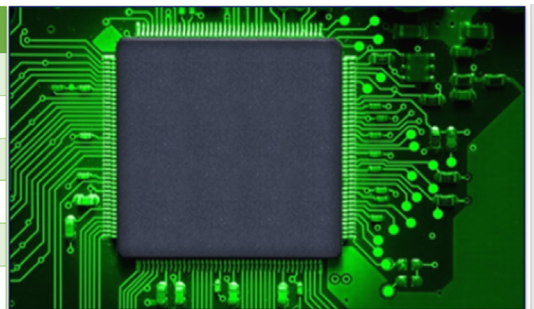
It was stated that, "The chip uses photons for input and output operations (IO), the computational operations themselves are done by a normal electronic core".
It was also claimed that the CPU's throughput density reaches up to 300GB/s per square millimeter- that is ten to fifty times as much as current CPUs (1).
"China's first photonic chip production line for "multi-material and cross-size" photonic chips, or integrated optical circuits, will be completed in Beijing in 2023." according to Global Times. Also, there were claims that "The calculation speed and transmission rate are 1000 times better than electronic chips"

About Storage: The new wave of memory-based storage blows away the older generations. It is becoming more common for companies to offer PCIe slots that can work as NVMe storage, allowing the drives to act more like the fast memory. In the last decades, CPU and GPU vendors have been struggling because storage has been the bottleneck in recent decades.

Sata SSDs vs. NVMe SSDs: SSDs are universally faster than old HDDs but the first SSDs were relatively slow. SSDs can either use NVMe or SATA as the method for communicating with the rest of a PC. Currently, the maximum speed for an NVMe PCIe 3.0 SSD is up to 3,500 MBps. The future SSDs will be NVMe PCIe 4.0 capable and can hit up to 7,500MBps.

SPEED (MBPS) — SATA HARD DRIVE: 200, SATA SSD: 550, NVME SSD: 3500
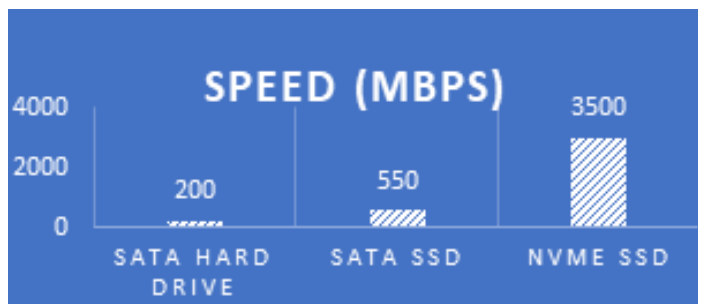
Comparison features of both NVMe SSD vs SATA SSD (Source: PCWorld)		
	NVMe SSD	**SATA SSD**
Cost range	250 GB ($ 50 to $ 90) 500 GB ($ 70 to $ 160) 1TB ($ 120 to $ 200)	250 GB ($40 to $70) 500 GB ($ 50 to $ 90) 1TB ($ 90 to $ 140)
Speed	PCIe Gen 3 Up to 3,500MBps PCIe Gen 4 Up to 7,500MBps	Up to 550MBps
Availability	High-end laptops or pre-built desktop PCs.	Budget laptops or pre-built desktop PCs.

Source : 1. This blogs is originally published by Masterdc Technology trends
2. Source: This article is originally published by Globaltimes

Dr. Rachappa Jopate
Information Technology-Lecturer

Learning Perspectives at Academia with Blockchain Technology

Blockchain is a method of recording information using a system that is difficult to be manipulated, changed, or hacked. It is a structure that keeps a block of records in several databases in the form of a "chain" in a peer to peer nodes of the network referred to as a "digital ledger" associated with a digital signature of the owner, to maintain authenticity from tampering with the data. The digital ledger is similar to a shared spreadsheet among the various computers in a network, in which the transactions are stored, and everyone can see that data, but they cannot modify or corrupt the stored information.

In HEIs, securing documents, such as student profiles, student transcripts, and many more is a big concern for all security personnel. Blockchain technology is a great solution for ensuring the security of encrypting record-keeping for certificates, transcripts, and many more documents in academia. It's a secure solution that can safeguard the veracity of our CVs or allow all necessary documents and educational information to be kept in a single database. The most capable application of Blockchain in HEI is the ability for colleges and universities to digitally transform credentials and encrypt them to secure their authenticity.

With the help of Blockchain technology, it is possible to identify a student's proficiency in learning. It can also be used to collect relevant data to help students choose the necessary courses from a variety of educational institutions where they can earn certification based on their interests and service-learning accomplishments in the future. The interests and pastimes of students can be shared via the distributed trust system too. Blockchain technology can be used in the classroom to make learning more interactive for students and make them focus more on the course's implications, critical thinking development, and general structure. The academic success of students is not just measured by the final performance evaluation; it also takes into account how much knowledge they are able to absorb during the learning process. These outcomes may more accurately depict students' levels of instruction and learning.

With these abilities, students will be able to completely explain their learning process, academic achievements, interests, skills, and extracurricular activities to potential employers upon graduation. Various teaching platforms coupled with blockchain technology enable teachers to carry out specialized training for students in accordance with their needs.

Dr. D Gnana Rajesh
Information Technology-Lecturer

Embrace the Technology but Value Nature

In the digital era, everything is available in this world at the click of a mouse. This digital transformation is a welcoming note as we must embrace the change, but we should also value the personal and mental well-being of an individual. Hence, while Mr. William Faulkner said "You cannot swim for new horizons until you dare to lose sight of the shore", let us always remember that there are other essential elements of our existence that we need to still value regardless of how far away we can swim from the shore. Nowadays, people have become more tech-savvy and spend most of their time on gadgets and developing technology, but they tend to forget about their social and personal health and well-being. Even socialization among people in the same family is only through social media which causes stress and loneliness at times when they do not meet them physically to share their emotions and feelings. In this article, I would like to also focus on insights about thought-provoking facts which have faded away due to the dominance of technology which has created a giant digital tidal wave in Silicon Valley. This was evident during the pandemic due to the growth of giant companies like Amazon, Apple, Microsoft, etc., in digital platforms.

In digital life, as we swam away from the shore across the sea moving towards a new horizon over a few decades, we have totally lost sight of the shore. We forgot that there is a consortium between nature and technology. As we talk about cultural heritage preservation on one side through digital platforms, we fail to recall our traditional way of living on the other side of the spectrum.

Is our modern life gradually disconnecting us from nature? It is high time to think about a hybrid way of living or a blended way of lifestyle to conserve our heritage as we headway with a new digital environment. The ways to build our personal and social well-being are still necessary to live a happy life in this digitally transformed ecosystem. For instance, we always spend more of our time inside a room either in the workplace or at home with closed windows and air-conditioning. At least, for an hour in the morning and late evening, we should keep our windows open to remove the closed air circulation and also to have a walk on the pavement to energize ourselves and move along with technology to lead a balanced life. Thus, live happier and healthier by balancing nature and technology.

Mr. Feroze Ahmed
Information Technology-Lecturer

Our experiences in training students in Huawei HCIA – DATACOM V1.0

I take pleasure in sharing our experiences in Training our student community in HCIA – DATACOM V1.0. Dr. Robin Cyriac and I, both IT lecturers in the Department of Information Technology at UTAS- Al Musannah were entrusted to carry out this work by our HoD, Dr. Najiba, and former HoS for Networking, Dr. Lenin. Our trainer for the course, Mr. Beh Chen Xiang, is from Malaysia. He was a man of perfection who ensured that he touched each concept of the course in both theoretical and practical approaches with ample examples wherever required. We owe a lot to him for our success in the training as well as in the certification exam.

As Dr. Robin and I managed to get ourselves certified by Huawei Technologies in the exam that we took by the end of the training session, we were given the opportunity to train our student community. I would like to mention here Huawei Technologies – UNIPORTAL (a single platform where you can begin the learning process till the completion of certification), a wonderful MOOC- style platform that had all the videos of the training that we underwent through Mr. Beh Chen Xiang which we played repeatedly till we understood the concepts thoroughly and clearly.

Having shared our experiences in certifying ourselves in HCIA Routing and Switching, we undertook the task of training the student community. Those were the days of the COVID pandemic when everything came to a standstill. Anyway, through online, we covered a lot. The only thing that we missed was the physical presence of our students in a physical classroom. Nonetheless, things went on well with the training session. Initially, we had some four hundred students who signed up, but the number decreased to around sixty. They were dedicated students who successfully registered and benefitted from the Uniportal provided by Huawei Technologies. We managed to cover the majority of the syllabus which we were trained on in two months with two hours per session twice a week. We are grateful to Huawei Technologies and to our ever-supportive heads for the opportunity to learn more, get certified, and eventually, gave back to our students.

Dr. Divyajyothi M G
Information Technology-Lecturer

Top 8 Technology Trends for the Future

1. Artificial Intelligence (AI) – Companies are spending billions of dollars on AI to innovate cutting-edge services. In the Sultanate of Oman, the OMANUNA (The Official Oman eGovernment Services Portal) has details on areas where AI has been successfully manifested and details on ongoing projects. Madinat Al Irfan is being developed to be the first smart city in Oman. Skills needed to master AI include Python Programming, Mathematics, Machine Learning, and Deep Learning.

2. Cloud Services – According to IT experts, cloud computing will be at the forefront of all technologies to address significant business issues in the next few years. G-Cloud is an Oman government cloud initiative for serving Omani government entities. For a successful career in cloud computing, one needs to be skilled in Databases, Programming, Linux, Networking, and APIs.

3. Internet of Things (IoT)– Each day, a lot of devices are becoming smart, connected, and striving to develop into a more crucial technology for sustainability in the digitization and datafication of society. Oman has already invested RO 4 million in an IoT devices factory project led by National Energy Center (NEC).

4. 5G Networks – As per the reports of the Global System for Mobile Communications Association, by 2025, the global subscribers for 5G networks are estimated to increase to over 1.7 billion. This is going to significantly contribute to much more bandwidth, low latency, and network slicing. Omantel promises to revolutionize Oman's ICT sector and harness the potential for more innovation and efficiency.

5. Quantum Computing –Quantum Computing tools are on their way! They have the ability to solve multivariable problems with unprecedented speed, accelerate autonomous vehicles, innovate in cybersecurity, and much more! D-Wave is one such Quantum Computing Company. The UAE has already signed a memorandum of understanding with this company to work on their first-ever quantum computing computer.

6. Big Data and Analytics – This technology contributes to enhancing the quality of services in all sectors. Skills needed to master it are Hadoop, Sql, Spark, and Python. The International Data Cooperation (IDC) predicts that by 2025, the total data on the planet could reach to 175 zettabyte. In the Sultanate, a lot of research is ongoing in using this technology for sustainability in sectors of marine fisheries, waste management, transportation, and smart city initiatives.

7. Virtual Reality and Augmented Reality – Top companies like Qualcomm and Apple are working on enabling a world where everyone and everything is intelligently connected. Towards the achievement of the Oman Vision 2040 and the 4th Industrial Revolution, successful intellectual property copyrights have been received for virtual reality laboratories, thus transforming the education sector.

8. Robotics – In the future, we are going to witness robots assisting us in all spheres of life. Recent work focus is on developing smart factories adopting Agile robotics and Cobot. Oman is all set to be a home for the largest robotics park in the middle east. Sand Valley Robotics Park is ready to be set up in the Rusayl industrial area, paving way for a lot of job opportunities for young innovators and investors.

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Mr. Urfi Mirza
Information Technology-Lecturer

A Dark World of AI : Deep Fake

A Deepfake is a computer-generated material that seems real to the human eye since it was created through a domain of Artificial Intelligence (AI) [1]. Deepfake is a type of AI used to create convincing images, audio, and video hoaxes. The Deepfake is a blend of the terms 'deep learning' and 'fake' and mainly refers to material produced by an artificial neural network(ANN). This new technology can be used in innovative and abundant ways. One example would be in a UK health authority when they used Deepfakes to get David Beckham to deliver an anti-malaria message. This message was also conveyed by him in nine languages. However, the most notable and most dangerous use of Deepfake is when others use the technology for malicious purposes. They can be used to spread misinformation from credible sources such as election propaganda, etc. This has led to the assumption that this technology will disrupt modern life. So, the major concern is to avoid fraud, credibility, and authenticity theft in the domain of politics, art, artist, internet meme, social media, blackmail, sock puppets, etc.

With Deepfake, picture manipulation techniques that include copy-move and image splicing are possible. Copy-move's common drawback is that it duplicates picture characteristics like color, brightness, and noise across areas [3]. Volumetric data modalities need convincing manipulation from different viewing angles, and this technique fails to provide it [4]. In Deepfake, an image and video manipulation program is based on an artificial intelligence method that aims to better comprehend human thinking and behavior [5]. Deepfake could also be used in medical technology in the future.

There are many methods available including Machine Learning approaches based on Deep Learning methods including Convolution Neural Network (CNN) [13], CNN with Long Short Term Memory (LSTM) [14], CNN with Support Vector Machine (SVM) [15], and Recurrent Neural Networks (RNN) [16]. Detecting Deepfake images requires evaluating a variety of factors, such as backdrop color modification and inconsistent head positions [17]. GAN-based tampering in real-time has yet to be verified with equivalency testing despite being effective when the original raw scan is changed [18]. To produce Deep fakes, two opposing deep learning models use the generative adversarial network (GANs) paradigm to iterate a data-based creation and verification job [19]. High-dimensional probability distributions are useful for training generative models. Other generative models that are often used to create realistic data including the latent models do not fully match the observed data distributions [21]. These models are based on the maximization of the probability that a certain event will occur. Nevertheless, a new combination of the Deepfake detection methods has been developed for further improvement. Here, the deep belief neural method and forensic-based investigation of optimization method are linked with the GAN approach for the significant fake detection performance. The method exhibits some of the high-level proceedings with the help of the diagram shown.
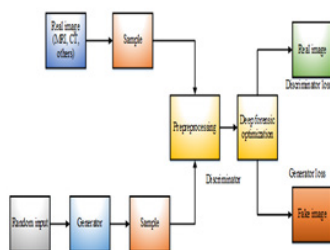
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Ms. Blessy Jayaron Jose
Information Technology-Lecturer

The Beauty and Application of COMSOL Multiphysics Simulation Software

The COMSOL Multiphysics software suite offers a broad package of finite element analysis, solvers, and multiphysics simulations across platforms. Most common branches of Engineering and scientific innovations involve the use of COMSOL. This multiphysics software generally models designs, devices, and processes throughout the entire spectrum of engineering, manufacturing, and scientific research. The Model Builder setup includes all of the simulation platform's phases such as listing the geometry, material qualities, physics, and math that define the phenomenon, as well as providing the appropriate answer.

Along with conventional issues, weak Partial Differential Equations (PDEs) can be resolved using the main multiphysics program.

Using Live Link for MATLAB, Autodesk Inventor, and Java APIs, the applications can be controlled from outside the computer. Once a model has been constructed, a simulation application can be made using the Application Builder.

Different Modules and Conclusion

Numerous modules for Electrical, Mechanical, Fluid, Acoustic, Chemical, and Interfacing are available in COMSOL. The most popular version of the module is version 6. This helps setting up multi-physics simulations simpler for simulation analysts. COMSOL might provide more options for collaborating on a simulation model across many physical domains.
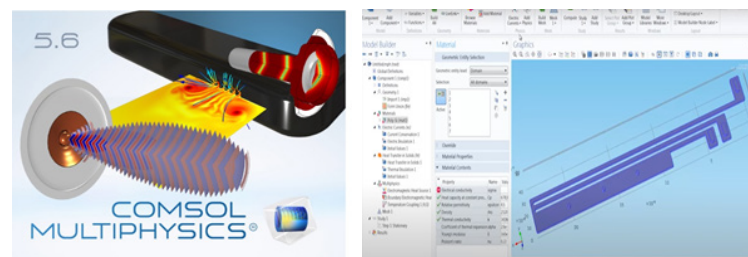
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Latest Technology and Trends

In this article, I would like to give a brief overview of cyber security, Cyber security is hard. A lot of security threats exists in today's world, these threats could harm from individual computer to corporate environment. The only aim of crackers is to break into your system or servers by installing backdoors, trojans and advanced malwares or scripts that cannot be identified by antiviruses. You might get an email that contains information such as you've won money, or that your bank account account has been deactivated, or a myriad of another pretext. The email includes a link or attachment, the moment you click the link it will navigate you to the webpage similar to your bank webpage. In reality the webpage belongs to criminal, the username and password you enter will be seen by the cracker. Alas, instead of giving your credentials to your bank you have ended up giving it to criminal. There's always going to be a friction that exists between security and convenience. Always keep a complex password. Think about at your house. When you set up your wireless network what kind of password did you use? Did you use a short password like puppy or baseball? Or did you use something that was much longer and more complicated and difficult to remember? Well, if you had a long, hard, and complicated password, your network is going to be much more secure, but it's also much less convenient. Think about it. If your friend comes over and says, can I connect to your Wi-Fi? You've got to go type in this long, complicated password each time and that's just one example of the challenge that we have between security and convenience. As people, we want convenience, but when we have convenience, we lose out on security. To increase security, we must make things a bit more challenging and more difficult, but, again, that takes away from convenience[2,3] (Graves, 2007), (Weidman, 2014). This is the balance that we're always dealing with inside our organizations. As organizations have fought with this challenge, there are things that have went out in this convenience sector that have given us less security. As we look at that, that's one of the reasons why we continue to have cyber-attacks and data breaches to this day. Just last year, there was 1.3 million dollars spent per data breach by major companies.

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Information Technology-Lecturer

This is an amazing fact and an astounding figure, but the reason is because we have this trade-off. We must make things easy for our users to use them daily but challenging enough that hackers can't get in.

Things like the CIA triad, confidentiality, integrity, and availability, and when we have all three of those, it means that our data and our information have good security. Information security is the act of protecting data and information from unauthorized access, unlawful modification and disruption, disclosure, and corruption, and destruction and protecting the systems that hold critical data[1] (Canavan, 2001). There are a lot of different topics related to security one need cover them in depth and clear certification exam to be called as security specialist, though. Lastly, University of Technology and Applied Science, AlMusanna offers a wide range of security courses within depth practical demonstration that enables them to choose a successful career in cyber security.

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Data Security in Cloud Computing

In general terms, cloud computing can be referred to as storing and accessing resources over the internet instead of on your local computer hard drives.

By using cloud computing, a variety of digital services can be provided to an individual, or to a business entity depending upon their requirements. If this current era is called the era of cloud computing in accordance with information technology, we should not be surprised anymore. There are many experts who strongly believe that in the future, there will not be any local disks, servers, or data centers on the premises.

So when we are keeping all our vital data in the cloud, the security and privacy of the data become a very critical factor. There are many vendors available in the market providing cloud computing for our business needs. The best example of cloud computing in correlation with UTAS-A is email, one-drive for students and staff, MS Teams, share point, online office application, and many virtual labs for students to access their data and application and to get their hand from anywhere in virtual labs.

There are important measures that are followed while providing cloud services to the end users by the service providers and 99% ensure the endpoint security of all data from all possible means of their clients. For example, by using multifactor authentication and encryption, data breaches can be avoided to the maximum level. Implementing a strong network traffic encryption of data will lead to any kind of data/information leakage through a network, so keeping a strong password and using password management software can mitigate the risk of attack and protect the end user's data from unauthorized access. Keeping a strong backup policy will secure the end user's critical data against any data loss, virus infection, etc.

Mr. Shahnawaz khan
Educational Technology Center-Technician

Volunteering your time and effort is free – but the benefits are priceless!

As a person who was raised to be thankful for the roof over my head and food in my belly each day, the concept of volunteering was instilled in me from a young age. It goes without saying, that volunteering is the most sincere form of charity – it is unconditional, it is limitless in that no act is too big or too small, and it helps us to truly appreciate our blessings in life. As language teachers, we can volunteer our time and expertise in so many ways – running after-school clubs, offering to train individual learners for competitions, or simply giving advice and guidance to someone who wants to start learning a language.

Ms. Anna Vorbek
English Language Center-Lecturer

When you think of volunteering, what comes to mind? Perhaps you are involved with cleaning up the beaches in your local area. Very possibly, and without hesitation, you gave your time and maybe more in the aftermath of Cyclone Shaheen last year. Personally, I have volunteered in a variety of local projects – making voice recordings for a children's book, donating family packs during Ramadan, and supporting a Muscat-based animal rescue charity to name a few.

On occasion, you might find yourself ready to volunteer in the face of unique circumstances such as disaster or war, and this is the situation I found myself in when the conflict in Ukraine arose in March this year. For most of us living and working far from Europe just now, the conflict can seem like a distant and intangible event. Coming from a Central European background myself and with my own home in nearby Poland, the escalation resonated with me on many levels. But what could I do from so far away?

Having gained valuable technical skills thanks to online teaching and learning during the pandemic, it seemed obvious to me that offering to work with refugees online would be a prompt and effective response to the situation, where currently many schools in Ukraine are closed, or learners are displaced and unable to gain access to education. I put out the feelers and somehow came across Smart Osvita NGO, which assigned weekly sessions to me with groups of 10–18-year-olds still keen to learn, but more importantly to distract them from their daily anxieties as traumatised victims of war. To date, I have delivered 30 sessions and I plan to continue with them as long as I am needed. During a recent interview by the NGO's media centre, I was asked if I feel I have achieved my goal while delivering the sessions. It is an impossible question to answer – teaching is a vocation, and all the time the conflict continues I know in myself that I have to help in some way, so volunteering is the least I can do.

When you volunteer, not only do you share what you have to offer with others who do not have enough, but you gain an enriching experience that can bring you closer to your community or a bigger cause. So whether you are cleaning up local beauty spots, or delivering alms during Ramadan, your gesture of volunteering can make an impact on unseen levels, while leaving you with a warm glow in your heart.

Water on an Empty Land via Green Energy

Let's have a small experiment. Imagine you leave your office after a hectic day of work. Before leaving, you poured a cup of water on the floor. The next morning, what did you observe? Not even a trace of water will be found at the place. Now, keep a cup of water on the table and then leave your office. The next day, the same amount of water in the cup remained. The same concept has triggered our mind to write a proposal that paved a way for the solution to a water problem in the Sultanate of Oman. When we open the tap, we get enough amount of water; thus, we do not realize the shortage of water. But after a few hours of a power cut which leads to a water pumping problem, the actual water crisis can be understood. The globe is getting warmer day by day and nature sucks water. As a result, water dries up. On the other hand, nature wants to maintain this ecosystem and so the water taken has been balanced by enormous rainfall. As the earth rotates, the water splashes in random places thus resulting in uneven rainfall. The failure of monsoon rains due to extensive long-duration of rain leads to cloud bursts.

Dr. Prabhu Natrajan
Information Technology-Lecturer

Dr. Charles Savarimuthu
Information Technology-Lecturer

The Sultanate of Oman is completely covered by desert and the climate is hot for more than seven months a year. In view of such climatic conditions, a proposal to store water in the hot desert was conceptualized. The water from the Gulf of Oman can be taken, and desalinated at various stations and water pools may be created at various places to store water. The rainwater can also be stored in the water pools. It requires a lot of energy for the entire process which can be generated through renewable energy. Solar energy is one of the predominant energy that the Sultanate always receives and our job is to extract them. It is comparatively cheap and green to extract these two forms of energy. However, these are uneven and need to be controlled. It is proposed to control these energies with smart technologies like the internet of things. Just with a click of a mouse from the office, the transportation of water from the lower level to the higher level can be controlled. The water pools are useful for vegetation for years to come.

Think Differently

The vast majority of people tend to follow the example set by others. They feel at ease following other people's ways since they are so straightforward, yet despite this effort, they still end up being ordinary people as a result. Famous personalities, who made their mark on history, whether in the fields of literature, poetry, science, leadership, or anything else, did so because of their original ideas, tenacity, and perseverance.

Ms. Rana Tarannum
Information Technology-Lecturer

"Small minds discuss people. Average minds discuss events. Great minds discuss ideas." Eleanor Roosevelt

Successful people often refuse to accept life as it is. They are constantly seeking ideas for improvements. They don't mind going against the popular because they are leaders rather than followers. They are dedicated to beating the odds and succeeding.

While the majority of us are quite contented with our full-time employment or the systems others have established, many successful people create opportunities for others. Recent entrepreneurs who thought differently and built their empires include Jeff Bezos (Amazon), Elon Musk (Tesla), Reid Hoffman (LinkedIn), Mark Zuckerberg (Facebook), and Salman Khan (Khan Academy).

"Your time is limited, so don't waste it living someone else's life." Steve Jobs

You don't only engage in different thinking when you need inspiration. Instead, it's a regular, subconscious habit that has an impact on many aspects of your life. We follow the Pass or Fail system that was first established by someone in our educational system. If we put "Try again" in place of "Fail" on the student's transcript, we can bring hope into many hearts and hence save many careers from ruin.

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Anger Management: The Need of the Hour

"A moment of patience in a moment of anger saves you a hundred moments of regret".

What is anger? Let me introduce you to this term through a short conversation. A saint was asked "What is anger?" and he gave a beautiful response saying that anger is the self-punishment for the wrongdoings of another.

We all are human beings capable of having emotions, and anger is an emotion. It is natural for us to get angry over something. However, remember that our mind is not a dustbin for anger, hatred, and jealousy.

Ms. Bindu Puthentharayil Vikraman
Electrical and Electronics Engineering-Lecturer

Anger management is not a technique to ignore or suppress anger. It is about learning how to express it in a way that is not physically or verbally abusive. You cannot change the things or people that irritate you or get rid of them, but you can learn to control your reactions.

The best way to control anger is to find the reason behind it. Find solutions to your problems, but never let your emotions overpower you.

"Holding on to anger is like grasping a hot piece of coal with the intent of throwing it at someone else when you are the one who gets burnt."

Tips to control anger:

1. Think before you speak. It's simple to say something you'll later regret when you're under the influence of emotion.
2. Keep your vengeance at bay since forgiveness is a robust tool.
3. Use humor to release tension and avoid sarcasm.
4. Practice relaxation skills.
5. Take a deep breath and repeat calming words.
6. If your rage appears out of control, get assistance.

I conclude with the words of Swami Vivekananda: "The man who gives way to anger or hatred cannot work; he only breaks himself to pieces".

Morphological Traits for Measuring Peanut Seed Germination

Natural "zero waste" plants like peanuts utilize every component of the plant, including the roots and hulls. Given that they require the least amount of water and produce the least amount of carbon dioxide of any nut, peanuts are an excellent substitute for farmers. The soil-improving and crop-supporting abilities of peanut plants are excellent. Frequent droughts and high temperatures in the Sultanate of Oman make it challenging to grow a variety of vegetation. Crops, especially peanuts, require natural fertilizers and a mild

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atmosphere to develop. Crop production success may be influenced by weather and soil conditions. On the other hand, poor seed quality has a significant role processing techniques. They become mentally incapable. Therefore, we back the proposed model that assesses seed germination quality by combining image processing and machine learning methods. It has been shown that incorporating intelligence into image processing algorithms would result in more precise findings. In this situation, machine learning algorithms that can be trained to understand seed germination quality are essential. A distinct database is required to train the machine learning algorithms since each seed type has distinct morphological characteristics. Based on its morphological in crop loss. This trait would hinder germination and have a detrimental effect on crop yield. The situation may be impacted by weather, water, and soil variables. A farmer may experience financial hardship and perhaps adverse living conditions if the crop seed quality is poor since they will lose time and money. Depending on the quality of the seeds, crop yield production could be improved from 10% to 20%. Therefore, evaluating the seed's quality is crucial. Initially, the labs carried out manual seed quality assessments, which might not have produced sufficient results. Modern image processing methods have been developed for employing computer vision to assess the germination quality of seeds. The primary indicator of seed quality throughout the germination process is morphological characteristics. This characteristic is applied to study alternative seed germination strategies using picture characteristics, this study employs machine learning techniques to assess the quality of peanut seed germination. Machine learning acquired throughout the peanut database training process can be used to further improve intelligence by developing suitable algorithms. In addition to helping the farmer, this also advances the agriculture-based economy. Keywords – Agriculture, Peanut, Sultanate of Oman, protein, and edible oil.

Electric Vehicles

The automobile industry plays a vital role in most countries since it supports the economy of the country and creates various job opportunities. Electric vehicles are the recent trend introduced to replace conventional vehicle designs which use gasoline as the primary fuel. The development of electric vehicles is encouraged in many countries to reduce operating costs and environmental pollution. Electric vehicles shortly called EVs are powered by electricity without using any kind of fuel.

Mr. Mohammed Jubair
Electrical and Electronics Engineering-Lecturer

EVs do not produce carbon emissions since the emission of carbon leads to the Greenhouse Effect, the primary factor in increasing atmospheric temperature. EVs produce lesser emissions than conventional vehicles. EVs use batteries that are charged by plugging into a power source or through regenerative braking. Now the question that arises is, how to fuel up the EVs? The charging of batteries can be done in two (2) ways: (1) by supplying AC power to the inverting Unit in EVs, which converts AC to DC to charge the batteries, and (2) by charging DC power directly to batteries by DC Fast Charging (DCFC) method. In recent trends, wireless or "inductive charging" has also been adopted to charge EV batteries without using a power cord. EV owners can charge their EV batteries at home, workplace, and public stations. It will take approximately 30 minutes to fully charge the batteries of EVs. Although, the charging time depends on the type/charging level and capacity of the battery. Now the next question is, how far can we drive fully charged EVs? The fully charged EVs can run up to 100kms approximately. Similar to mobile/laptop battery levels, we need to check the battery level of the EVs and rush to nearby public charging outlets. This process is the same as our conventional gasoline vehicle designs needing to refuel at gasoline stations.

TYPES OF ELECTRIC VEHICLE

1- BATTERY ELECTRIC VEHICLE (BEV)
2- HYBRID ELECTRIC VEHICLE (HEV)
3- PLUG-IN HYBRID ELECTRIC VEHICLE (PHEV)

The research and development of batteries with higher capacities with fast and powerful charging modes and unique wireless charging techniques benefit the deployment of electric vehicles. Then EVs will play an important role in the future of Smart Cities.
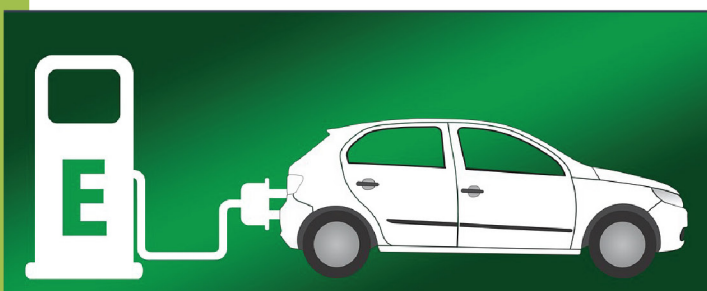
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