

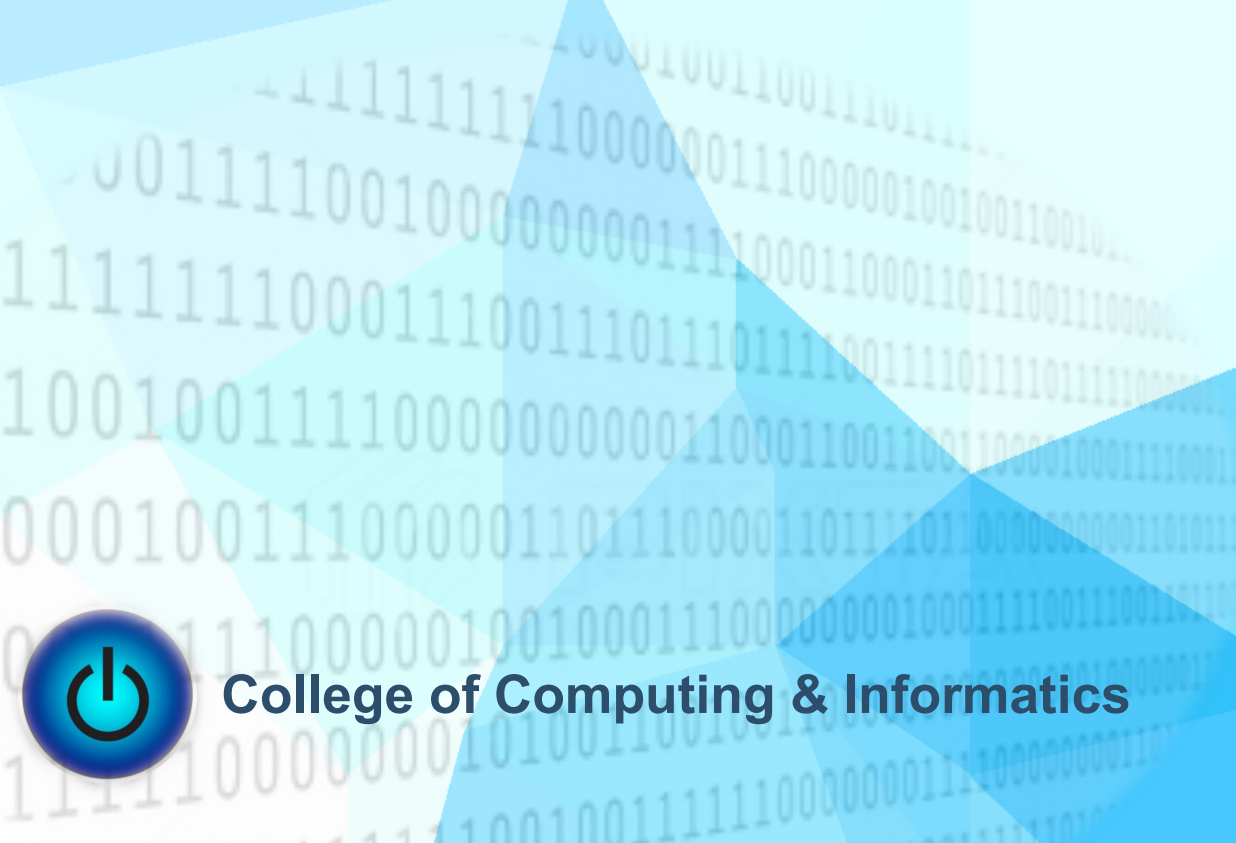


جامعة الشارقة
UNIVERSITY OF SHARJAH



CONNECT

Issue 2



College of Computing & Informatics



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Dean's Word

Welcome to the second issue of CONNECT, a digital publication from the College of Computing and Informatics (CCI) where we highlight and focus on our impact activities. This is the second publication we have in addition to our CASCADE magazine where we disseminate our faculty and students' success stories.

In this issue, we have compiled great articles from across CCI communities on a wide range of topics including: the new six CCI distinctive and impactful MSc and BSc programs in the areas of artificial intelligence, data science, cyber security, biomedical informatics and data analytics, stories from CCI faculty members about their impactful research that inform our teaching, interviews with our alumni students and how they are connecting and contributing to the community. This issue also covers our activities in relation to our partnership strategy and international collaborations to maximise our visibility and impact.



Prof. Abbes Amira

Plus, we have a section dedicated to different emerging technologies around the UAE, including: the first of its kind NFTart exhibitions in Sharjah and Dubai, creating digital assets by Dubai Police, and first metaverse wedding in the UAE.

And as always, we welcome articles and success stories from faculty members and our students to disseminate our impact and interdisciplinary activities.

My thanks to all of you who contributed to this issue and the great success of having our new programs accredited. The efforts you made, and the results achieved in this academic year, have contributed significantly to our 3is strategy focusing on impact, interdisciplinary teaching and research, and income. We look forward to celebrating more achievements in 2022-2023.

New College Programs (Starting from Fall 2022-2023)

Master in Data Science

Build data analytics knowledge and valued-skills with a qualification from one of the UAE leading universities. Department of Computer Science, College of Computing and Informatics

(M.Sc.) degree in Data Science, is designed to prepare students for academic and research careers in the emerging and vital field of Data Science, which is dealing with large sets of data. The M.Sc. program will prepare the students to analyze high volumes of data, question assumptions, discover patterns in the data, develop insights, construct narratives, and provide solutions that make sense. At University of Sharjah (UoS) students learn to explore data using computer science, statistics, and high-level mathematics. In particular, they learn how to analyze data, visualize their results, and articulate their discoveries. Students will leave the program with the ability to critically think about the real problems that need to be solved, not to simply find technical solutions.



*Program Coordinator:
Prof. Zaher AL Aghbari*

Data scientist has become one of the key careers of the century. The anticipated program will emphasize various aspects of data science and related fields. Consequently, the graduates are expected to find jobs in sectors like industry, commerce, government, and science. In addition, since the application areas for data science are very broad, graduates can work in a field that sparks their own personal interest.

New College Programs (Starting from Fall 2022-2023)

Master in Cybersecurity Engineering

Prepare for technical leadership in the highly sought-after field of Cybersecurity with the unique advantage of Engineering. Department of Computer Engineering, College of Computing and Informatics

The Master of Science in Cybersecurity Engineering Program (MSCSE) aims to offer the graduate student foundational and advanced knowledge in the topics related to cybersecurity from an Engineering perspective. The program is intended to accept incoming students from varied computing related undergraduate programs. Keeping in mind that incoming students may not have foundational knowledge, the program offers the needed background in the required core courses before embarking on advanced topics in the electives.



*Program Coordinator:
Dr. Bassel Soudan*

The Cybersecurity job market is soaring while supply is running critically low. Cyber security engineers are responsible for protecting the networks and systems of an organization against threats from adversaries in cyberspace. The functions of cyber security engineers include performing assessments and penetration testing, development and implementation of secure network solutions. Cybersecurity engineers can apply for the following jobs: IT Security Engineer, Network Security Engineer, Cybersecurity Architect and Consultant.

New College Programs (Starting from Fall 2022-2023)

Master in Artificial Intelligence

To foster competent AI experts with a qualification from one of the UAE leading universities. Department of Computer Science, College of Computing and Informatics

The new MSc. in Artificial Intelligence is an exciting new two-year program to provide potential AI engineers the skills, theory, and recognition they need to develop in their role. For the first time, candidates can gain a full MSc degree in this specialist area through a mixed learning process with an emphasis on practical application in the workplace.



*Program Coordinator:
Prof. Ashraf Elnagar*

AI career opportunities have escalated recently across at the national and international levels due to its surging demands in all sectors. The hype that AI will create tons of jobs is justifiable. A career in AI looks more promising than any other jobs available these days. Recognizing the transformative potential of AI, employers need AI talent to fulfil the rising technological requirements. Abundant AI career opportunities are present owing to wide applications in different fields such as AI Scientist, AI Architect, Machine Learning Scientist, Machine Learning Engineer, Big Data Analyst, Business Intelligence Developer, Data Scientist, Data Analyst, and Robotics specialist.

New College Programs (Coming Soon)

Master in Data Analytics

Enhance your ability to analyse data, formulate strategy, and effect change by earning a degree from one of the nation's top universities.

The Master of Science (M.Sc.) degree in Data Analytics, will prepare the students with the knowledge and skills in various data analysis and methods to become effective decision-makers. Students will apply data-driven approaches to solve business challenges in different business areas.

The proposed M.Sc. program will prepare students with the knowledge and skills necessary to become successful decision-makers using various data analysis and strategies. Students will use data-driven techniques to address business difficulties across a variety of industries.

The Program is hosted by the College of Computing and informatics but it is designed in collaboration with College of Business Administration and College of Sciences.

Businesses across industries are looking for data-literate people that possess a thorough grasp of the mechanics of data analysis, an awareness of how businesses operate, and the ability to find and express data-driven insights that affect business choices.

One of the most in-demand roles in the UAE job market is that of business/data analyst. Companies such as Amazon.ae, IBM Middle East, SAP Middle East & North Africa, Oracle, Deloitte & Touche Middle East, PricewaterhouseCoopers, Emirates, McKinsey & Company, Ernst & Young, A.T. Kearney, Hewlett-Packard, Bank of China, Majid Al Futtaim Group, Deloitte, and others are currently hiring fresh graduates and experienced professionals with a background in business analytics.



*Program Coordinator:
Dr.Saadat M. Alhashmi*

New College Programs (Starting from Fall 2022-2023)

Bachelor of Science in Cybersecurity Engineering

Be part of engineering team to assure secured systems and safe information exchange in the cyber society. Department of Computer Engineering, College of Computing and Informatics.

The proposed program enables the students to build solid technical foundation in cybersecurity engineering. During the study, students take courses on essential computer engineering topics and courses on data breaches, software and hardware vulnerabilities and possible solutions to improve security of various computer systems from cyberattacks. In the final year, students will develop senior capstone projects in line with the latest industry needs for building cyber-resilient systems. Senior students are required to perform practical training in industrial or governmental organization to improve their understanding of cybersecurity risks in real work environment and the measures to mitigate them.



*Program Coordinator:
Dr. Ali ElMoursy*

Demand in the cybersecurity job market is soaring while supply is running critically low. Cyber security engineers are responsible for protecting the networks and systems of an organization against threats from adversaries in cyberspace. The functions of cyber security engineers include performing assessments and penetration testing, development and implementation of secure network solutions. Cybersecurity engineers can apply for the following jobs: IT Security Engineer, Network Security Engineer, Cybersecurity Architect and Consultant.

New College Programs (Starting from Fall 2022-2023)

Bachelor in Biomedical Informatics

Become an informatics leader in the bioinformatics, pharmaceutical, clinical, or health care industries with a qualification from one of the UAE leading universities. Department of Computer Science, College of Computing and Informatics.

The field of Biomedical Informatics has now become a key player in both medical research and education and has been implemented in diverse medical subjects including epidemiology, genetics, surgery, cell and molecular biology and pathology. The Biomedical Informatics (BSc-BI) is designed to provide a multidisciplinary knowledge and skills to the students, enabling them to work in the various tracks related to biomedical informatics with many career options lying ahead. BSc-BI is designed to prepare students for careers in the emerging and vital field of biomedical informatics. The program enables the students to build solid technical foundation in Biomedical Informatics and to become an informatics leader in the bioinformatics, pharmaceutical, clinical, or health care industries.



*Program Coordinator:
Prof. Ahmed Khedr*

Graduates of the program can work in governmental agencies, private, international organizations such as hospitals, medical centers, consultant for healthcare insurance companies, and universities, among others. Working positions range from research work at research institutes, academic work at universities, software engineers at software companies, hospitals, pharmaceutical companies and healthcare laboratories. In particular, graduate of the program can work as a clinical data manager, clinical systems analysts, consultants, researchers, developers, and project supervisors/ managers, or quality support analysts.

College Partnership Highlights

The College of Computing & Informatics signs MoU with VMWare

The University of Sharjah and VMware have signed a memorandum of understanding to launch a VMware IT Academy to enable IT students at the university to gain accreditation in transformative digital solutions in areas including app modernization, cloud, networking, security, and digital workspace.

The MoU promotes mutual collaboration in information technology, train students and offer educational resources. In addition to organizing events, workshops, and seminars within the field.



College Partnership Highlights

Several Meetings with Amazon

The College of Computing & Informatics has met several times with Amazon to discuss collaboration on academia and research. The college can collaborate with AWS Academy, which is a program specifically for higher education institutions where AWS will train the faculty who can then impart knowledge to students on various cloud related topics.



College Partnership Highlights

Valuable Collaboration with NVidia

The college has discussed several ways of collaborations with NVidia. The college has nominated 3 ambassadors to start organizing a first deep learning institute training for the college colleagues and students.



College Partnership Highlights

On Going Collaborations with Huawei

Huawei has delivered Huawei's training and certification programs to UoS through the Huawei ICT Academy. They also provided the Huawei Certification Academy Instructor (HCAI) training service for professional instructors and students at the college. The college has organized several events with Huawei. Moreover, the students have participated in their competitions.



College Partnership Highlights

Oracle Academy & Oracle for Research

The college conducted several meetings with several units in Oracle. We have put a clear road map for valuable collaboration on academia and research. This fruitful collaboration includes areas such as cloud computing, artificial intelligence, machine learning, data science, the Internet of Things, and beyond.



ORACLE

College Partnership Highlights

Cyper Wales

Dr. Ala Altaweel, Dr. Iman Akour, Dr. Sohail Abbas, and Dr. Mohamed Elhoseny from the College of Computing and Informatics conducted two online meetings During Spring 2022 with Mr. Faheem Azhar and Mr John Davies from Cyber Wales Company to discuss and present their education tools for Cybersecurity courses. Cyber Wales has relations with the Welsh government and many academic institutes in Wales and UK. Moreover, Cyber Wales signed different partnerships and agreements with some institutes in UAE and provided some workshops and webinar (e.g., to Dubai police).

During these meetings, the Cyber lab of Cyber Wales (a.k.a. Sudo Cyber) has been used by some universities in UK and Wales. Sudo Cyber can be used to add courses by structuring their contents and labs outline by taking the course learning outcome. Or it might leverage an existing course/lab as well as a competition part (for grading, which is a competing platform with different questions based on the user understanding of the courses and labs. This can be used to generate/assemble points/grades. A detailed discussion for the Cyber and Networking and Ethical hacking courses was conducted to present how to teach students ethical hacking methodologies, defensive tools like password hacking, social engineering, Wireshark, decode/encode tools, virtualized windows, Kali machine, etc.



College Partnership Highlights

AI/Tech Initiative with Emirates NBD & AI Ministry

The college will start a country initiative with Emirates NBD and AI Ministry to initiate a hub on AI/Tech for finance services.



Stories from the College

Dr. Thar Shamsa from Computer Science Department has won the Sharjah Islamic Bank Award for his scientific research project. He got awarded on behalf of his team on research project entitled “A blockchain-based Fog-oriented lightweight framework for smart public vehicular transportation system” during 14th Scientific Research Forum.



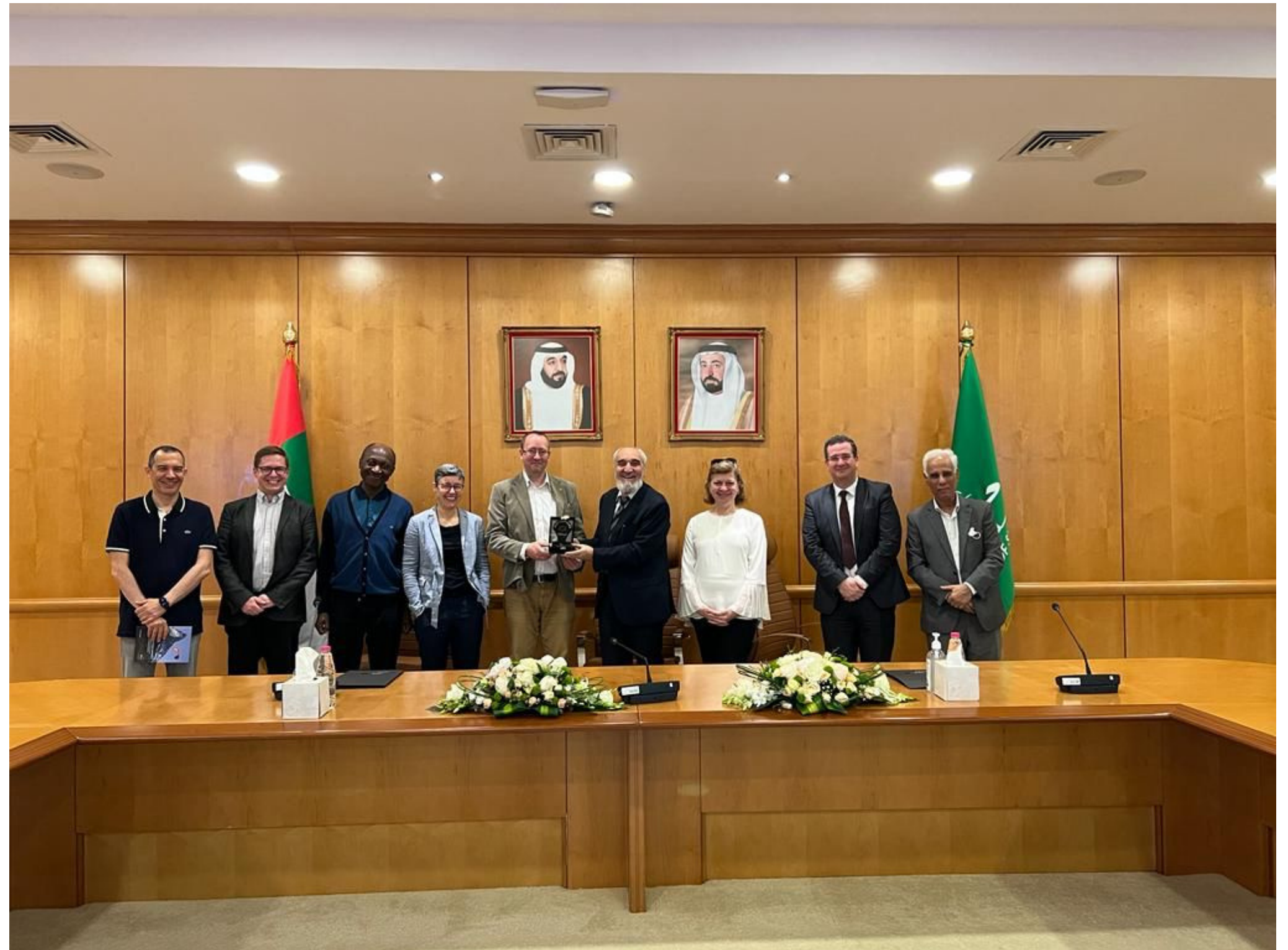
Stories from the College

College of Computing & Informatics has participated in 12th Open Day where University of Sharjah have received 2500 students from public and private schools. The college has introduced the academic programs for the three departments and got the chance to talk to several parents during the Open Day.



Stories from the College

The College has discussed research and academic collaboration with three universities in Switzerland.



Stories from the College

The Center of Data Analytics and Cypersecurity has showcased some research projects to HH Shiekh Sultan bin Ahmed Al Qasimi during 14th Scientific Reseach Forum.



Stories from the College

The College of Computing and Informatics Association held a wonderful fun-filled event for students of all colleges to attend and connect. This marked the end of the midterm examination period and provided attendees with much needed enjoyment.



Stories from the College

Google Developer Student Club at University of Sharjah has organized Ramadan Iftar Day where more than 70 students got together and enjoyed the holy month gathering.



Stories from the College

End of year senior projects and master thesis presentations to address recent challenges and solve community related problems from both departments: Computer Engineering & Computer Science.



Stories from the College

Dr Imad Afyouni and Prof Zaher AL Aghbari from Computer Science Department has won innovation box grant to fully support and implement their innovative project “Deep Maps”.



Dr Imad Afyouni



Prof Zaher AL Aghbari

Stories from the College

College of Computing & Informatics has participated in the launch of Center of Data Analytics & Cybersecurity in presence HH Minister Sarah bint Yousef Al Amiri, the Minister of State for Advanced Technology.



Stories from the College

Seba Mohammad Al Mokdad (CS) and Hala Ali Jamhawi (IS) from College of Computing & Informatics has won first prize in Innovator Competition. Their winning project is about a platform that gathers studnets and experts in one place for exchanging expertise and internship opportunities.



مشروع تدرييك
(TADREBAK)

معاً نلهم الفرق

الفائزين في
«مسابقة المبتكر»
ضمن دورتها الثانية

معاً نلهم الفرق

Stories from the College

The College has participated in Women in Data Science event through two master students Mariam Hassan and Fatima DakAlBab. Women in Data Science” event has been hosted and organized by Heriot-Watt University, Dubai Campus. It is initiative by Stanford University to present research work and listen to the insights shared by distinguished panelists and speakers from the field of AI, machine learning and data analytics.



WiDS UAE 2022 at Heriot Watt University Dubai
Lightning Talks

Morning Session



Anna Tarabasz



Sameh Benfredi



Swati Nirupam



Mariam Hassan



Fatima DakAlBab

Afternoon Session



Anna Maria Pappa



Lina Bariah



Mary Thankam



Nouran Shetta & Nadeen
Tarek



Abeer Haroon



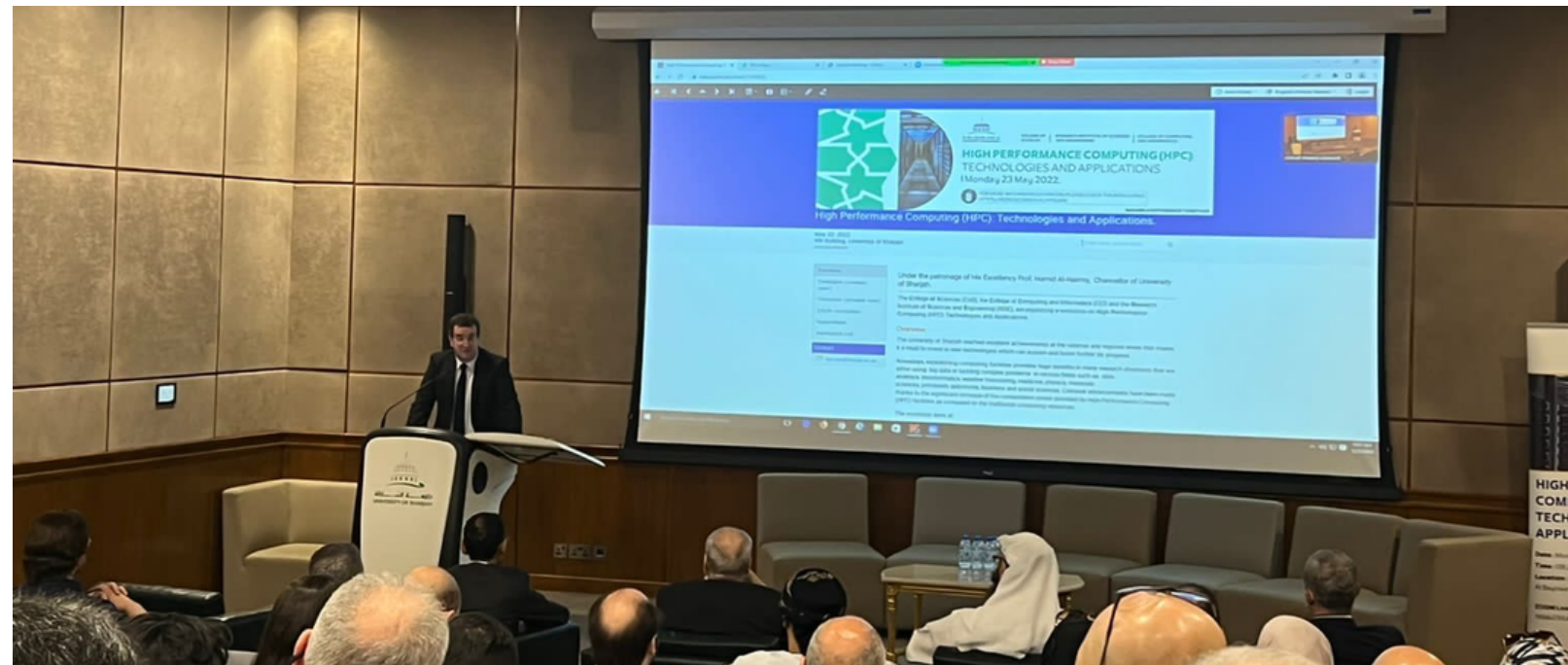
Stories from the College

Seba Mohammad with her team from different universities have won the Best Presentation on their project entitled NurseQ thy focuses on Healthcare Nurse schedule Problem using Quantum computing Technology: D-wave In NYUAD Hackathon.



Stories from the College

Under the patronage of His Excellency Prof. Hamid Al-Naimiy, Chancellor of University of Sharjah the College of Sciences (CoS), the College of Computing and Informatics (CCI) and the Research Institute of Sciences and Engineering (RISE) organized a workshop on High Performance Computing (HPC): Technologies and Applications in collaboration with other universities and industries.



Stories from the College

Honored faculty members at the UOS Scientists Awarding Ceremony

Sheikh Sultan bin Ahmed Al Qasimi, Deputy Ruler of Sharjah and President of the University of Sharjah, honored 46 scientists and researchers, from UOS, ranked among the top 2% of the world's scientists, according to what was published by Stanford University in cooperation with the publishing house "Elsevier BV.

The ranking is based on the Aug 01, 2021 snapshot from Scopus and is updated to citation year 2020. The database provides standardized information on citations, h-index, co-authorship-adjusted hm-index, citations to papers in different authorship positions, and a composite indicator. The honoree from the College of Computing and Informatics include:

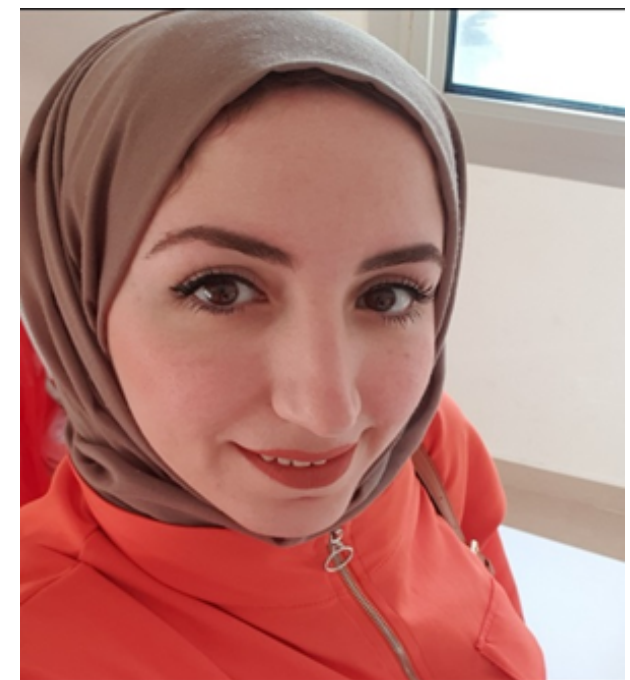
1. Prof. Ashraf Elnagar
2. Prof. Ahmed Khedr
3. Dr. Ibrahim Abaker
4. Dr. Thar Shamsa
5. Dr. Ali Bou Nassif
6. Dr. Basel Soudan
7. Dr. Mohamed Elhoseny for being the 2nd top scientists ranking for Computer Science in UAE “Research.com”.



Interview with Alumni



- What is your name? Asma Ziad kuhail
- What is your major? Management information system (MIS)
- When did you graduate? 2012
- What is your current career? Owner of (Qamees) which is tailoring & designing shop
- How did the university prepare you ? University prepared me by investing my knowledge and my studies in my work
- Can you give an advice for the current student? For current students study well and enjoy your university life because its the best!



Interview with Alumni



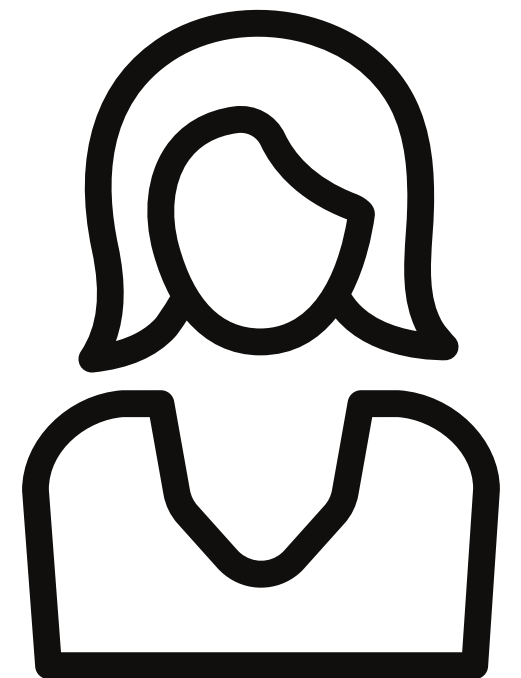
- What is your name? Mohamad Nadim
- What is your major? Computer Sciences
- When did you graduate? Fall 2020/2021
- What is your current career? Software Engineer
- How did the university prepare you ? Making internship programs take students off campus, giving them real-life experience in their chosen career field.
- Can you give an advice for the current student? Manage your time wisely, and don't put things off to the last minute. Stay organized with an agenda of the assignments due so you won't forget. Lastly, the best way to be in-the-know is to ask questions and use the resources that you have available to you.



Interview with Alumni



- What is your name? Inas Tariq Abu Setteh
- What is your major? Management Information System (MIS)
- When did you graduate? 2005
- What is your current career? I am working as Senior Personal Assistant in Dubai Electricity and Water Authority (DEWA)
- How did the university prepare you ? university prepared me by providing the right education and provides me with the right trainings that prepares you for the kind of work you will be doing in the profession once you are out in the workforce. Also, one of the most valuable things I gained from university is creating a valuable network.
- Can you give an advice for the current student? Learn from Mistakes • Be a Good Person • Be a Lifelong Learner • Always Listen



Interview with Alumni



- What is your name? Manal Al Ansari
- What is your major? Bsc. of Computer Engineering
- When did you graduate? 2008
- What is your current career? I am scrum master, IT department for leading Bank.
- How did the university prepare you ? compare to today's university ecosystem, 20 years ago, there was minimal external engagements and exposure to industries. I must say the university taught us great skills such as teamwork, see challenges as opportunities and never give up.
- Can you give an advice for the current student? your experience starts at the university: network, participate in events and competitions, learn new things, find aspirations, work on real projects if possible and build your profile while in college. Also invest your time as student in courses that will set you apart.



Interview with Alumni

The wide variety of disciplines offers a unique opportunity to meet people from different backgrounds and different programs. The comprehensive campus gives a good feeling of university life . outstanding teaching staff in computer science was a great differentiator. Having a number of different schools/colleges makes non-Computer Science electives very interesting. some of the electives that I took sparked an interest in those subjects that continues till today. problem solving was a recurring theme throughout the university years, which is such an important skill later in life . The Internship program was an excellent way to get a glimpse of professional life. First and foremost, enjoy your time. This is a once in a lifetime opportunity and you should make the most out of it. Go beyond the syllabus and try to expand your horizons. For example, programming competitions, were one of the best learning exercises that I did during my time at the University of Sharjah. Finally, make many friends as it gets harder to make friends later in life.

Amar Hamzeh

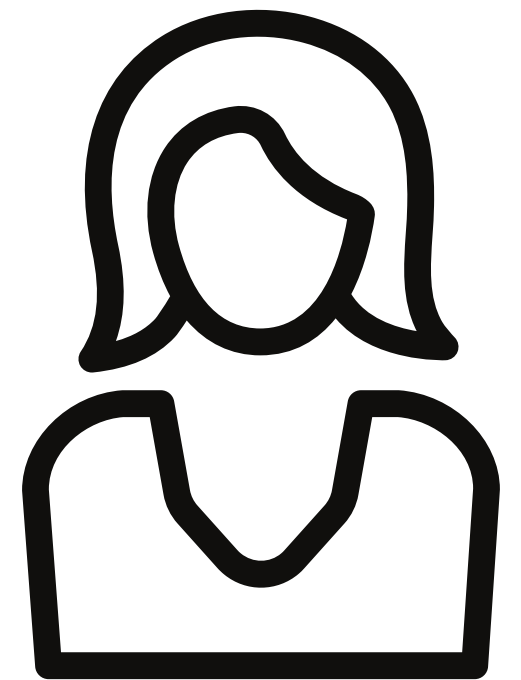
Team Lead, Technical Service at MongoDB, Sydney - Australia



Interview with Alumni

Studying computer engineering at the University of Sharjah was a great opportunity to gain knowledge and meet professionals. I learned how to design, plan, develop and test hard to reach my goals. Currently, I am completing a master's degree in electrical engineering and engineering. I'm glad I chose. "

Maha Aladdin Computer Engineering



Emerging Technology around the UAE

The 'Metaverse' is a virtual world impersonating the real world. The digital environment is a combination of different technologies such as Blockchain, augmented reality and virtual reality. The UAE is at the forefront of this sensory and immersive experience.

1) The first of its kind NFT art exhibitions in Sharjah and Dubai

There has been a lot of noise with regards to NFTs recently. An NFT is a digital ownership of pretty much anything, known as a non-fungible token. NFT art pieces are anything but traditional art but they seem to be popular even with a huge price tag attached. The digital art is best viewed on a 4K screen. Traditional artwork may be displayed alongside its digital version as well. The digital art is available for collectors to purchase using QR codes.



Emerging Technology around the UAE

2) Dubai Police first government entity in the UAE to create digital assets

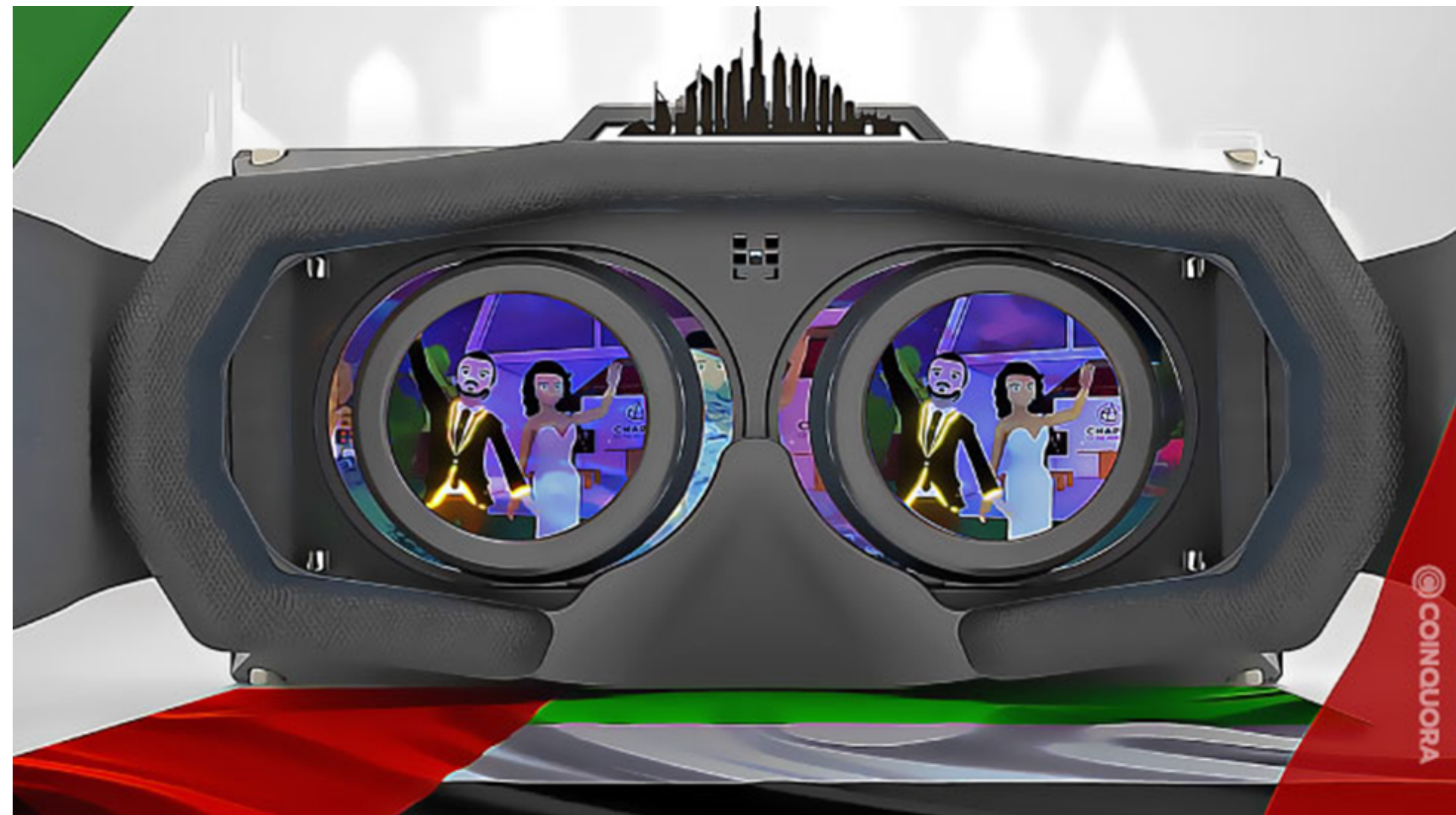
Dubai Police is also the first police organization in the world to create its own set of non-fungible tokens (NFTs), which cannot be exchanged for another item. These unique tokens represent innovation, security and communication, which are stored in a digital ledger called Blockchain. NFTs are usually purchased using cryptocurrency but the first 150 are up for grabs for free by Dubai Police.



Emerging Technology around the UAE

3) The first Metaverse wedding in the UAE

The virtual wedding took place this month to accommodate family members from both sides who were spread across the globe. This helped tremendously during the pandemic by allowing people to attend from the comfort of their home. Both the bride and groom purchased their outfits from the largest NFT marketplace. 3D holographic avatars and social interactions via video constitutes a large portion of a wedding in Metaverse. Of course, this kind of event cannot overcome computer glitches or bandwidth issues.



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