Dr. Sumaya Ihsan Mnawer Abusaleh
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PROFILE

Uphold a key role as an Assistant Professor at a leading university in Jordan. Seeking to expand knowledge while successfully employing innovative solutions. Thrive under pressure in a challenging environment with a strong work ethic, excellent leadership, communication, and public speaking skills in Arabic and English languages, and extensive experience working with diverse communities. Exceptional experience and knowledge in software development. A strong background in offering courses related to advanced computer science and engineering.

RESEARCH INTERESTS

Machine learning, Deep learning, Computer Vision, Natural Language Processing, Cybersecurity, Energy, and the Internet of Things (IoT).

EDUCATION

Doctor of Philosophy in Computer Engineering \ Computer Vision and Artificial Intelligence   **2016**
University of Bridgeport, Bridgeport, CT, USA
Dissertation Title: "A Novel Computer Vision-Based Framework for Supervised Classification of Energy Outbreak Phenomena." Advisors: Prof. Ausif Mahmood & Prof. Khaled Elleithy

Master of Computer Science, Amman Arab University for Graduate Studies, Amman, Jordan   **2007**

Bachelor of Computer Science, Mutah University, Alkarak, Jordan   **2003**

Associate Degree in Programming, Al-Balqa Applied University, Ma'an, Jordan   **2000**

TECHNICAL SKILLS

Programming: Python, Visual C#, ASP.Net, Flutter, Java, C++, Visual Basic, C, PASCAL, Assembly.
Operating Systems: Kali Linux, Windows 10/11.
Software: Microsoft 365, Android Studio, Visual Studio Code, MATLAB, Statistical Package for the Social Sciences (SPSS), SQL Server, Oracle, Eclipse IDE for Java, Macromedia Director 8.5, Adobe Flash, Adobe Photoshop CS6, Sound Forge Pro.
Networking: Cisco CCNA.
Professional Certifications:

- Penetration Testing | University of Arizona, USA
- Network Security Certificate | University of Arizona, USA
- Computer Security Certificate | University of Arizona, USA
- Image and Video Processing and Machine Learning with Python Certificate | ATIT Academy, Germany
- Deep Learning with Python Certificate | ATIT Academy, Germany
- Certified Microsoft Innovative Educator (MIE) | Microsoft, Educator Center
- Keeping Students Engaged: Building Strong Student / Teacher Connections in a Remote Learning Environment Certificate | Microsoft, Educator Center

EXPERIENCE

Assistant Professor, Department of Computer Science | Department of Software Engineering,   **2018 – Present**
School of Information Technology
Al-Hussein Bin Talal University, Ma'an, Jordan

- Head of Software Engineering Department   **2023**
- Proposed new courses for the Data Science and Artificial Intelligence program: Fundamentals of Data Science course (0615330), Data Engineering course (0615331), and Neural Networks and Deep Learning course (0615345)   **2022**
- Proposed a new course for the Computer Information Systems program: Fourth Generation Language course (Python Programming - 0613322)   **2021**

- Conducted lectures in Software Design and Implementation (0614322), Distributed Systems (0612336), Multimedia Systems (0613434), Visual C# Programming (0612313), Special Topics in Computer Science (Computer Vision - 0612491), Internet Skills and Social Media (0612100), Digital Image Processing (0612443), Computation Theory (0612201), Compiler Design (0612412), and Fourth Generation Language (Python Programming - 0613322) **2018-2022**
- Served as an undergraduate project advisor, the project entitled "An IoT-Based Framework for Hydroponic Management System," Students: Majd khasawneh, Danya Obaidat, and Jafar Damra **2020**

Research Associate, School of Engineering **2017 – 2018**
University of Bridgeport, Bridgeport, CT, USA
- Conducted research in deep learning, programming deep networks, convolutional neural networks, and recurrent neural networks, in addition to testing their performance on standard benchmarks. Fine-tune the deep architectures to obtain improved classification accuracy

Graduate Assistant, School of Engineering **2013 – 2017**
University of Bridgeport, Bridgeport, CT, USA
- Successfully assisted Prof. Ausif Mahmood in Windows Programming (C#) and Image Processing courses
- Conducted class lectures, proctored exams, assisted in the preparation of course materials, and graded assignments, mid-term, and final exams
- Regularly maintained flexible office hours, facilitated one-on-one and group tutoring sessions, and provided advice and support for students to resolve class-related issues

Full-Time Lecturer, Department of Information Technology **2005 – 2009**
Al-Balqa Applied University, Ma'an College, Ma'an, Jordan
- Conducted lectures in Computer Networks, Database Systems, Multimedia Systems using Macromedia Director 8.5, Information Retrieval Systems, System Analysis, Network Management, Visual Basic, and Software Engineering
- Developed a multimedia desktop application using Macromedia Director 8.5 software about the human body at Prince Ali Bin Al-Hussein Center for Deaf Users in Amman, Jordan
- Developed a multimedia desktop application using Macromedia Director 8.5 software for fourth-grade math students

System Administrator, Information Technology Center **2003 – 2005**
Al-Balqa Applied University, Ma'an College, Ma'an, Jordan
- Provided software and hardware installations, system specifications, troubleshooting, maintenance, and resolved WLAN configuration problems
- Maintained college website and account management to ensure continuous updating and client satisfaction.
- Successfully provided training on computer programming to employees and students, while providing them with computer technical support on Windows 98, 2000, XP, and Vista
- Assisted in the implementation of Oracle registration software and trained administrative staff

CONFERENCE PUBLICATIONS

- **S. Abusaleh**, V. Pande, and K. Elleithy, "Optimized Algorithm for Face Detection Integrating Different Illuminating Conditions," *The 2012 International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV'12)*, Las Vegas, Nevada, USA, July 16-19, 2012
- **S. Abusaleh**, E. Abdelfattah, Z. Alabadi, and A. Sharieh, "The Effects of Educational Multimedia for Scientific Signs in The Holy Quran in Improving the Creative Thinking Skills for Deaf Children," *Innovations in Computing Sciences and Software Engineering*, Springer, Dordrecht, pp. 403-408, 2010

JOURNAL PUBLICATIONS

- **S. Abusaleh**, A. Mahmood, and K. Elleithy, "The Art of Reading Explosion Phenomena: Science and Algorithms," *IEEE Access Journal*, vol. 6, pp. 3280 – 3299, 2017
- **S. Abusaleh**, A. Mahmood, K. Elleithy, and S. Patel, "A Novel Vision Based Classification System for Explosion Phenomena," *MDPI Journal of Imaging*, vol. 3, no. 2, p. 14, 2017

REVIEWING ACTIVITIES

- **Reviewer**: IEEE Transaction on Artificial Intelligence — **July 2022 – Present**
- **Technical Committee Member for Graduation Projects**: School of Information Technology, Al-Hussain Bin Talal University — **May 2022 – Present**
- **Project Committee Chair:** School of Information Technology, Al-Hussain Bin Talal University — **May 2019**
- **Judging Panel Member:** 2019 Hult Prize, Deanship of Student Affairs, Al-Hussain Bin Talal University — **December 2018**
- **Project Committee Chair:** School of Information Technology, Al-Hussain Bin Talal University — **December 2018**
- **Reviewer:** IEEE Access Journal, Impact factor: **3.476** — **January 2018 – Present**
- **Technical Committee:** Student member of International Joint e-Conferences on Computer, International, and System Science, and Engineering (CISSE) — **2010 – 2013**

MEMBERSHIPS

- **Member, IEEE Young Professionals** — **2014 – Present**
- **Member, IEEE Communication Society (IEEE ComSoc)** — **2013 – 2017**
- **Member, IEEE Women in Engineering Society (IEEE WIE)** — **2013 – Present**
- **Member, Upsilon Pi Epsilon (UPE)** — **2013 – Present**
- **Member, Association for Computing Machinery (ACM)** — **2013 – 2017**
- **Member, National Society of Black Engineers (NSBE)** — **2012 – 2015**

COMMITTEES

- **Member, Scientific Research Committee, School of Information Technology, Al-Hussain Bin Talal University** — **November 2023 – Present**
- **Member, Students Disciplinary Committee, School of Information Technology, Al-Hussain Bin Talal University** — **November 2023 – Present**
- **Member, School of Information Technology Council, Al-Hussain Bin Talal University** — **November 2023 – Present**
- **Member, Al-Hussein Bin Talal University Council** — **January – October 2020**
- **Member, Website Committee of the School of Information Technology, Al-Hussain Bin Talal University** — **January 2020 – December 2021**
- **Member, Students Disciplinary Committee, Deanship of Student Affairs, Al-Hussain Bin Talal University** — **January 2020 – December 2021**
- **Member, Scientific Committee for students' activities, School of Information Technology, Al-Hussain Bin Talal University** — **January 2020 – January 2021**

HONORS & AWARDS

- Designated by the Ministry of Foreign Affairs and Expatriates of Jordan to represent Al-Hussein Bin Talal University for the virtual event entitled "Workshop on Computational Nuclear Science and Engineering," International Atomic Energy Agency (IAEA) — **2021**
- Ph.D. Award: $7,500 for each academic semester, School of Engineering, UB, USA — **2013 – 2016**
- Woman of Innovation Competition: Nominated by Dr. Ausif Mahmood, Connecticut Technology Council — **2015**
- Scholar Citizen Award – Annual Student Leadership Recognition Banquet, UB, USA — **2013**
- International Honor Society Member for the Computing and Information Disciplines Upsilon Pi Epsilon — **2013**
- Graduate Poster Award – Honorable Mention, Faculty Research Day, UB, USA — **2012**
- Travel Grant Award to attend IEEE WoWMoM2011 in Lucca, Italy — **2011**
- Received a full scholarship for four years to pursue the Ph.D. degree at UB, Scholarship sponsor: AL-Hussein Bin Talal University, Ma'an, Jordan — **2009**

CONFERENCES | WORKSHOPS | WEBINARS | TRAINING COURSES

- Attended the event entitled "Developing Curricula for Artificial Intelligence and Robotics (DeCAIR)," The project is Co-funded by the Erasmus+ Programme of the European Union, The University of Jordan, Amman, Jordan **December 12, 2023**

- Participated in the workshop entitled "How to Prepare Erasmus+ Jean Monnet Proposal for a Module," organized by the National Erasmus+ Office, Applied Science Private University, Amman, Jordan **December 13, 2023**

- Participated in the online Cybersecurity Program – Level 3 entitled "Penetration Testing," 36 hours, organized by the University of Arizona, USA, and Princess Sumaya University for Technology, Jordan **August 26 – December 2, 2023**

- Attended Episode 4 of Breakthroughs in Fusion R&D webinar series entitled "How Ignition and Target Gain > 1 was Achieved in Inertial Fusion," arranged by the International Atomic Energy Agency (IAEA) **January 18, 2023**

- Attended Episode 3 of Breakthroughs in Fusion R&D webinar series, arranged by IAEA, the agenda was as follows: **December 14, 2022**
  - Academic Research on Turbulence and Abrupt Instability of Isotope Mixture Plasmas in Large Helical Device (LHD) | Katsumi Ida, National Institute for Fusion Science (Japan)
  - The Recent Progress of the Korea Institute of Fusion Energy (KSTAR) Resolving Physics and Engineering Key Issues for ITER and Beyond | KSTAR
  - Simple Dipole Arrays to Simplify the Design and Production of Stellarators | Princeton Plasma Physics Laboratory

- Attended the webinar entitled "Machine Learning for Scientific Discovery with Examples in Fluid Mechanics," arranged by IAEA & International Telecommunication Union (ITU) **November 29, 2022**

- Attended the workshop entitled "Smart Grid Technology: The Role in Solving Problems Facing Modern Power Systems," arranged by CIGRE National Association of Jordan, Amman, Jordan **November 15, 2022**

- Attended the webinar entitled "Fusion and Plasma for a Sustainable Future," US Side Event at the 66th IAEA General Conference, Topics were as follows: **September 28, 2022**
  - Getting to Fusion Electricity
  - Plasma-based Nanofabrication for Microelectronics
  - Plasma-aided Water Treatment: A nonthermal, Green Approach to Addressing Emerging Threats to Drinking Water Quality and Safety
  - Disinfection of Room Air and Surfaces during COVID-19 with Deep-Ultraviolet Lamps

- Successfully conducted a crash course entitled "Machine Learning: Hands-On Python," 4 hours, for the students of the Dual Study Program | Computer Science Department, School of Information Technology, AL-Hussein Bin Talal University with We Are All Jordan Youth Commission, Amman, Jordan **September 27, 2022**

- Attended Episode 2 of Breakthroughs in Fusion R&D webinar series, arranged by IAEA, the agenda was as follows: **July 14, 2022**
  - East Tokamak achieves a Record Long-Pulse Operation in Thousand-Second Scale | Institute of Plasma Physics, Chinese Academy of Science, China
  - Key Results from the Wendelstein 7-X Stellarator and Visions for a Stellarator Fusion Power Plant | Max Planck Institute for Plasma Physics, Germany

- Successfully completed the online course entitled "ASP.Net (MVC)," 33 hours, The Hope International Company, Amman, Jordan **May 17 – July 26, 2022**

- Attended the webinar entitled "Learning Artificial Intelligence from Use Cases in Japanese Government," arranged by The Ministry of Digital Economy and Entrepreneurship (MoDEE) with Japan International Cooperation Agency (JICA) **December 15, 2021**

- Participated in the virtual event entitled "Workshop on Computational Nuclear Science and Engineering," organized by IAEA. Topics were as follows: **July 12 – 16, 2021**
  - Day 1: Computational Nuclear Science and Engineering
  - Day 2: Nuclear Observation Challenges
  - Day 3: Advanced Modeling and Simulation Methodologies for Nuclear Science and Engineering
  - Day 4: Open-Source Data and Codes for Nuclear Science and Engineering
  - Day 5: Advanced Computational Methods for Nuclear Science and Engineering
- Participated in the online training course entitled "Image and Video Processing and Machine Learning with Python: A Complete Practical Course for Researchers," 33 hours, ATIT Academy, Germany **June 19 – August 14, 2021**
- Participated in the online training course entitled "Deep Learning with Python: A Complete Practical Course for Researchers," 33 hours, ATIT Academy, Germany **June 12 – August 22, 2021**
- Participated in the training sessions entitled "References Citation Using Endnote Software," 4 hours, organized by The Academic Development and Quality Assurance Center, Al-Hussein Bin Talal University, Ma'an, Jordan **May 31 – June 1, 2021**
- Participated in the training sessions entitled "Erasmus+: The European Union programme for Education, Training, Youth, and Sport," 2 hours, organized by The Academic Development and Quality Assurance Center, Al-Hussein Bin Talal University, Ma'an, Jordan **May 24, 2021**
- Successfully completed the online course entitled "Flutter," 40 hours, The Hope International Company, Amman, Jordan **May 1 – July 1, 2021**
- Participated in the virtual training program entitled "Future Technology: Artificial Intelligence, Big Data, Internet of Things, and Blockchain," 12 hours, organized by The Ministry of Youth, Amman, Jordan **April 5 – 8, 2021**
- Participated in the training sessions entitled "Fundamentals of the Academic Quality Assurance," 4 hours, organized by The Academic Development and Quality Assurance Center, Al-Hussein Bin Talal University, Ma'an, Jordan **April 6 – 7, 2021**
- Participated in the training sessions entitled "Preparing the Course File," 4 hours, organized by The Academic Development and Quality Assurance Center, Al-Hussein Bin Talal University, Ma'an, Jordan **March 28 – 29, 2021**
- Participated in the training sessions entitled "Classroom Management and Modern Trends in Education," 4 hours, organized by the Academic Development and Quality Assurance Center, Al-Hussein Bin Talal University, Ma'an, Jordan **March 14 – 15, 2021**
- Successfully completed the online course entitled "Python and Machine Learning," 60 hours, organized by the Hope International Company, Amman, Jordan **December 26, 2020 – March 27, 2021**
- Participated in the online Cybersecurity Program – Level 2 entitled "Computer Security," 36 hours, organized by the University of Arizona, USA, and Princess Sumaya University for Technology, Jordan **November 16, 2020 – February 15, 2021**
- Participated in the intensive Human Capacity Development program on "Digital Teaching and Blended Learning," arranged by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, MOVE-HET Project, Ma'an, Jordan. Training modules were as follows: **October 15 – December 23, 2020**
  - Module 1: Digital Arrangements: Theoretical Background, Blended Learning and Flipped Classroom, and E-Assessment
  - Module 2: Digital Curriculum: Designing and Managing Online Courses, and Developing Educational Multimedia Content
  - Module 3: Digital Environments: Building the Learning Ecosystem, and Designing and Measuring Virtual Social Learning Environments
- Participated in the online Cybersecurity Program – Level 1 entitled "Network Security," 36 hours, organized by the University of Arizona, USA, and Princess Sumaya University for Technology, Jordan **June 15 – August 24, 2020**

- Participated in the online Microsoft training course entitled "Certified Microsoft Innovative Educator," organized by Microsoft, Educator Center, 2 hours — **December 14, 2020**
- Participated in the online Microsoft training course entitled "Keeping Students Engaged: Building Strong Student / Teacher Connections in a Remote Learning Environment," organized by Microsoft, Educator Center, 2 hours — **December 2, 2020**
- Participated in the training program entitled "Research and Analysis Using SPSS," 10 hours, organized by Migrate Company, Amman, Jordan — **September 21 – 22, 2019**
- Attended the Information Day on " Cooperative Higher Education for the Dual Study System in Germany and other countries," organized by GIZ, Amman, Jordan — **July 18, 2019**
- Attended a specialized training on "The Design and Analysis of the Electronic Questionnaire for Survey Research," 10 hours, organized by the Academic Development and Quality Assurance Center, Al-Hussein Bin Talal University, Ma'an, Jordan — **April 7 – 15, 2019**
- Attended a specialized training on "The Criteria of King Abdullah II Award for Excellence in Government Performance and Transparency," 10 hours, organized by USAID and AL-Hussein Bin Talal University, Ma'an, Jordan — **December 3 – 4, 2018**
- Attended a specialized training on "Improving the Teaching Skills of Faculty Members," 30 hours, AL-Hussein Bin Talal University, Ma'an, Jordan — **September 16 – 20, 2018**
- Participated in the Phi's Research and Innovation Summit 2018 (PRSI), Amman, Jordan. The following workshops were conducted in the PRSI: — **August 17 – 18, 2018**
    - Healthcare Decision-Making in the Era of Artificial Intelligence & Data Analytics Workshop
    - Game Development Workshop Using Unity
    - Digital Fabrication and Prototyping Techniques Workshop
    - The Mont Carlo Simulation Method: A Powerful Numerical Tool for Solving Problems in Science and Engineering Workshop
    - AI Applications in Medicine and Neuroscience Workshop

RESIDENTIAL LIFE SERVICE

Community Assistant (CA), Office of Residential Life and Student Conduct — **2010 – 2013**
University of Bridgeport, Bridgeport, CT, USA
- Successfully performed daily tasks as the CA of the Graduate Residence Hall. Guaranteed the safety and health of 300+ students, such as the check-in/out process, taking disciplinary action when necessary, and during a fire drill
- Obtained annual certified training in providing efficient support to residents. Responded quickly and calmly following protocol in emergencies and crises, such as for victims of domestic violence and injuries
- Regularly offered guidance and peer counsel to students facing a variety of challenges, such as struggles in their studies, financial difficulties, and roommate conflicts
- Conducted bi-weekly Health and Safety inspections for building maintenance, improvements, and safety
- Collaborated as a team of 16 peers from different backgrounds to create programs and engaging living experiences and environments that fostered intellectual, social, and cultural respect for diverse populations of international students

COMMUNITY SERVICES

Trainer, INJAZ Organization — **2018 – 2019**
Deanship of Student Affairs**,** AL-Hussein Bin Talal University, Ma'an, Jordan
- Successfully conducted "My Entrepreneurial Project of the Entrepreneurial and Employment Programs"

Martin Luther King Day of Service, Harborview Towers — **2012**
University of Bridgeport, Bridgeport, CT, USA
- Engaged with elderly and/or developmentally disabled residents, served food, and participated in activities and games

Cultural Awareness Event, North & South Halls   **2012**
University of Bridgeport, Bridgeport, CT, USA
- Successfully proposed an idea for a cultural awareness event in the graduate residential hall that was attended by over 150 people. Lead 16 community assistant peers in the planning and organization of the event. Managed the responsibility of assisting 30 UB students, from all around the world, who participated in the presentation of their countries of origin and cultures

Youth Mentor, We Are All Jordan Youth Commission   **2007 – 2008**
Ma'an, Jordan
- Organized activities with volunteers that developed youth members' skills to serve the community, for example, a fundraiser for orphans, collecting food, clothing, toy donations, and running a blood drive
- Held workshops on topics such as time management, problem-solving, learning to handle a work environment
- Took the initiative to plant trees and save the environment
- Lead group tours to Jordanian historical sites

LANGUAGES:
- Excellent in reading, writing, and speaking in Arabic and English