Abdulla M. Al-Mutawa -2024

❶ Name & Rank: Abdulla M. Al-Mutawa**,** Associate Professor

❷ Education

Degree	Discipline	Institution	Year
Ph.D.	Computer Science	Syracuse University	1999
M.S.	Computer Science	Syracuse University	1996
B.S.	Computer Engineering	Kuwait University	1994

❸ Academic Experience

Institution	Designation	Year/Period
Ministry of Education	President of MILSET Asia	2023 - 2024
MILSET organization	Consultant to HH Minister Of Education of Kuwait State	Feb 2025 - Present
University of Hamburg	Visiting Professor	Feb 2023 - Feb 2025
PLOS-ONE	Editorial Board Member	Nov 2022 - Present
MILSET	Scientific Consultant and Steering Board Member	Feb 2022 - 2024
UNISCO-UN	International Expert and Consultant in AI-Ethical issues	Jan 2020 - Nov 2021
The E-learning Directors Committee at the Universities and Higher Education Institutions of Arab Gulf Cooperation Countries	Head of the Secretariat	Jul 2020Jan 2022
Kuwait University	Acting Vice President for Academic Support Services	Jul 2020Jan 2022
Kuwait University	Assistant Vice President for IT	Jun 2020Jun 2022
College of Engineering and Petroleum, Kuwait University	Director of E-Services and Engineering Education at the College of Engineering and Petroleum, Kuwait University	Sep 2017Sep 2019
Arab Robotic and AI Association	Board member of the Arab Robotic and AI Association	Oct 2016 - Present
ROBOTEC, Consultations in IT	Founder and CEO	Apr 2016 - Present
Kuwait University	Assistant Vice President for academic services for computer systems and distance learning	Oct 2012Oct 2014
Kuwait University	Director of the Office of Engineering Education	Oct 2005Oct 2012

④ **Non-Academic Experience:**

⑤ **Certifications / professional registrations:**

⑥ **Membership in Professional Organization:**
- IEEE Robotics and Automation Society: Piscataway, NJ, US
- IEEE Computer Society: Washington, DC, US
- IEEE Computational Intelligence Society: Piscataway, NJ, US
- IEEE Computational Intelligence Society: Piscataway, NJ, US
- IEEE: New York, NY, US
- Association for the Advancement of Artificial Intelligence: Palo Alto, CA, US
- Association for Computing Machinery: New York, NY, US
- Arab Robot and AI Association: Amman, JO
- Mouvement International pour le Loisir Scientifique Et Technique (MILSET): Paris, FR
- Arab Robotic and AI Association: Amman, JO
- GCC Standardization Organization: Riyadh, Riyadh, SA

⑦ **Honors and Awards:**
- His Highness Shaik Salem Al-Sabah Award in Informatics Excellence in Artificial Intelligence 2022
- One of the architects of the ethics in AI worldwide agreement at UN
- Adviser to His Excellency the Minister of Education in the State of Kuwait
- Pioneer and visionary of the digital transformation movement in Kuwait
- The author of the blended learning book and its impact on the development of critical thinking among the students
- Winner of the first place in the Kuwait International Prize for the year 2012
- Winner of the first place in the Kuwait International Prize for the year 2011
- Winner of the first place in the Kuwait Electronic Award 2009
- Establishing the first Gulf workshop on robotics in 2008
- Won the first prize for best Poster among 300 other posters in the Second Scientific ResearchConference

⑧ **Service Activities:**

⑨ **Publications and Presentations (from the past five years):**
- A. M. Mutawa, A. Alshaibani and L. Anwer Almatar, "A Comprehensive Review of Dust Storm Detection and Prediction Techniques: Leveraging Satellite Data, Ground Observations, and Machine Learning," in IEEE Access, vol. 13, pp. 39694-39710, 2025, doi: 10.1109/ACCESS.2025.3541075.
- A. M. Mutawa, "Analyzing Gender-Based Satisfaction Disparities in Online Learning: A Quantitative Survey in GCC Nations," in IEEE Access, doi: 10.1109/ACCESS.2025.3572351.
- A. Alshaibani, A. M. Mutawa and L. A. Almatar, "GANs for Satellite-Based Next-Frame Prediction of Dust," in IEEE Access, doi: 10.1109/ACCESS.2025.3569451.
- A. M. Mutawa, G. R. Hemalakshmi, N. B. Prakash and M. Murugappan, "Randomization-Driven Hybrid Deep Learning for Diabetic Retinopathy Detection," in IEEE Access, vol. 13, pp. 38901-38913, 2025, doi: 10.1109/ACCESS.2025.3546359.
- Mutawa, A. M., & Sruthi, S. (2025). A Comparative Evaluation of Transformers and Deep Learning Models for Arabic Meter Classification. Applied Sciences, 15(9), 4941. https://doi.org/10.3390/app15094941

- Mutawa, A. M., & Sruthi, S. (2025). A Comparative Evaluation of Transformers and Deep Learning Models for Arabic Meter Classification. Applied Sciences, 15(9), 4941. https://doi.org/10.3390/app15094941

- Mutawa, A. M. (2025). Predicting Intensive Care Unit Admissions in COVID-19 Patients: An AI-Powered Machine Learning Model. Big Data and Cognitive Computing, 9(1), 13. https://doi.org/10.3390/bdcc9010013

- Mutawa, A. M. (2025). Attention-Based Hybrid Deep Learning Models for Classifying COVID-19 Genome Sequences. AI, 6(1), 4. https://doi.org/10.3390/ai6010004

- Mutawa, A. M., & Sruthi, S. (2023). Enhancing Human–Computer Interaction in Online Education: A Machine Learning Approach to Predicting Student Emotion and Satisfaction. International Journal of Human–Computer Interaction, 40(24), 8827–8843. https://doi.org/10.1080/10447318.2023.2291611

- Mutawa, A. M., Allaho, M. Y., & Al-Hajeri, M. (2024). Machine Learning Approach for Arabic Handwritten Recognition. Applied Sciences, 14(19), 9020. https://doi.org/10.3390/app14199020

- Mutawa, A. M. (2025). Enforcing the Ethics of Artificial Intelligence in Education: To Prevent or Brace AI Tools in the Educational System. In A. Mutawa (Ed.), Impacts of Generative AI on the Future of Research and Education (pp. 143-168). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-0884-4.ch007

- Mutawa, A. M. & Sruthi, S. (2025). UNESCO's AI Competency Framework: Challenges and Opportunities in Educational Settings. In A. Mutawa (Ed.), Impacts of Generative AI on the Future of Research and Education (pp. 75-96). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-0884-4.ch004

- Mutawa, A.M.; Allaho, M.Y.; Al-Hajeri, M. Machine Learning Approach for Arabic Handwritten Recognition. Appl. Sci. 2024, 14, 9020.

- Martis, J. E., M S, S., R, B., Mutawa, A. M., & Murugappan, M. (2024). Novel Hybrid Quantum Architecture-Based Lung Cancer Detection Using Chest Radiograph and Computerized Tomography Images. Bioengineering, 11(8), 799. https://doi.org/10.3390/bioengineering11080799

- A.M. Mutawa, Aya Hassouneh,

- Multimodal Real-Time patient emotion recognition system using facial expressions and brain EEG signals based on Machine learning and Log-Sync methods,

- Biomedical Signal Processing and Control, Volume 91, 2024, 105942, ISSN 1746-8094, https://doi.org/10.1016/j.bspc.2023.105942.

- Mutawa, A. M., Al-Sabti, K., Raizada, S., & Sruthi, S. (2024). A Deep Learning Model for Detecting Diabetic Retinopathy Stages with Discrete Wavelet Transform. Applied Sciences, 14(11), 4428. https://doi.org/10.3390/app14114428

- Mutawa, A. M., Hemalakshmi, G. R., Prakash, N. B., & Murugappan, M. (2024). Advanced Detection of Diabetic Retinopathy: Employing Hybrid Deep Neural Networks and Multi-Scale Image Analysis Techniques. Preprints. https://doi.org/10.20944/preprints202401.2082.v1

- Martis, J.E.; M S, S.; R, B.; **Mutawa, A.M.**; Murugappan, M. Novel Hybrid Quantum Architecture-Based Lung Cancer Detection Using Chest Radiograph and Computerized Tomography Images. *Bioengineering* **2024**, *11*, 799. https://doi.org/10.3390/bioengineering11080799

- A.M. Mutawa, An end-to-end Tacotron model versus pretrained Tacotron model for Arabic text-to-speech synthesis, Journal of Engineering Research (JER), Aug 22, 2023

- Mutawa, A.M.; Al Mudhahkah, H.M.; Al-Huwais, A.; Al-Khaldi, N.; Al-Otaibi, R.; Al-Ansari, A. Augmenting Mobile App with NAO Robot for Autism Education. *Machines* **2023**, *11*, 833. https://doi.org/10.3390/machines11080833

- Mutawa AM, Alnajdi S, Sruthi S. Transfer Learning for Diabetic Retinopathy Detection: A Study of Dataset Combination and Model Performance. *Applied Sciences*. 2023; 13(9):5685. https://doi.org/10.3390/app13095685

- Mutawa AM, Al Muttawa JAK, Sruthi S. The Effectiveness of Using H5P for Undergraduate Students in the Asynchronous Distance Learning Environment. *Applied Sciences*. 2023; 13(8):4983. https://doi.org/10.3390/app13084983

- https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0284021

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- https://www.intechopen.com/online-first/1129171
  Mutawa, A. M. (2023). Perspective Chapter: MOOCS at Higher Education: Current State and Future Trends

- **A.M. Mutawa,** S.T. Tolba, "Digital Twin of a Data Center at Education Institution", Journal of Engineering Research, Submitted 17-10-2021, Revised 17-1-2022, Accepted 2-2-2022, Published 20-3-2022

- **A.M. Mutawa,** M Arami, 2022, 'Antecedences of Continued Blended Learning Adoption Intentions: A Framework for Acceptance of Blended Distance Learning', Journal of Engineering Education, Vol 10 No 2A, pp. 72-81, DOI: https://doi.org/10.36909/jer.14171

- **A.M. Mutawa**, S. Sruthi, "STUDENTS' PERSPECTIVE TOWARDS ONLINE PROCTORING IN EXAMS DURING COVID-19", Journal of Engineering Research, 2022

- M Murugappan, **A M Mutawa**, 2021 'Facial geometric feature extraction based emotional expression classification using machine learning algorithms', PLOS ONE, vol1 6(2): doi: 10.1371/journal.pone.0247131. PMID: 33600467; PMCID: PMC7891769.

- S. Alnajem, **A.M. Mutawa**, H. AlMeer, A. AlQemlas, 2021, 'A Prolog-based approach to Arabic syntax and semantics' Journal of Eng. Research Vol. 9 No. (3A) September 2021 pp. 134-142, https://doi.org/10.36909/jer.v9i3A.10129

- Aya Hassouneh, **A.M. Mutawa**, M Murugappan, "Development of a Real-Time Emotion Recognition System Using Facial Expressions and EEG Based on Machine Learning and Deep Neural Network Methods", Informatics in Medicine Unlocked. 2020

- **A.M. Mutawa**, 2019. "Single Channel Speech Enhancement using a Complex Spectrum Method", International Journal of Circuits, Systems and Signal Processing, Vol. 13, pp. 667-677.

- **A.M. Mutawa**. 2020, 'Improving Patient Voice Intelligibility by using a Euclidian Distance-Based Approach to Improve Voice Assistant Accuracy', International Journal of Circuits, Systems and Signal Processing, Vol 14, pp 329-339

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  A.M. Mutawa, Mariam A. Alzuwawi, 2019, 'Multilayered rule-based expert system for diagnosing uveitis', Artificial Intelligence in Medicine, vol 99

Books and Chapters

- A.M. Mutawa. "Government Digital Transformation: A road map" The Gulf Study Center, Kuwait University, June 2023. DOI: 10.5772/intechopen.1001367
- A.M. Mutawa, "Perspective Chapter: MOOCS at Higher Education: Current State and Future Trends," in Massive Open Online Courses - Current Practice and Future Trends, G. Dr. Sam Ed. Rijeka: IntechOpen, 2023, Peer-reviewed chapter. Submitted: January 28th, 2023 Reviewed: February 22nd, 2023 Published: March 28th, 2023. DOI: 10.5772/intechopen.1001367
- A.M. Mutawa, "DISTANCE LEARNING IN A PANDEMIC - CHALLENGES, OPPORTUNITIES, AND ASSESSMENT STRATEGIES", Eliva Press SRL, peer-reviewed book. ISBIN-10: 9994988581. July. 2023.
- A.M. Mutawa. "Chat GPT and the Future of Education in the Age of Artificial Intelligence in the Gulf Countries" The Gulf Study Center, Kuwait University, 2023

⑩ **Recent Professional Development Activities:**