

Muhammad Ahmed Zaki

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Objective

To pursue excellence in the domains of Artificial Intelligence and Machine Learning, making significant contributions to the advancement of academia and research in these fields. By actively working towards the betterment of society, I aim to utilize my skills and knowledge to drive meaningful impact and foster innovation in AI and ML.

Professional Experience

Lecturer **September 2022 to Present**

Department of Computer Science & IT NED University of Engineering & Technology, Karachi.

Visiting Faculty **May 2022 to July 2022**

Thar Institute of Engineering, Sciences & Technology (TIEST), Mithi.

Visiting Faculty **November 2019 to February 2020**

Government College of Technology, Hyderabad.

Intern **October 2019 to November 2019**

Information & Communication Processing Center (MUET), Jamshoro.

Intern **June 2019 to July 2019**

National Telecommunication Corporation, Hyderabad.

Intern **June 2018 to August 2018**

Pakistan Telecommunication Corporation Limited, Hyderabad.

Intern **June 2016 to July 2016**

Radio Broadcasting Corporation, Hyderabad.

Education

Masters of Engineering (Computer & Information Engineering) **November 2021** **(3.78/4.00 CGPA)**

Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.

Thesis: Disease Diagnosing in Onion Crop Using Neural Network

Bachelors of Engineering (Telecommunication Engineering) **December 2018** **(3.64/4.00 CGPA)**

Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.

Thesis: Optical Character Recognition (Image to Text)

Selected Publications

Journal Papers

- [1]. A. Raza, U. Amjad, **M. A. Zaki**, and H. Farman, "Deep learning approach for the classification and detection of dental and craniofacial conditions," *Vestnik Yuzhno-Uralskogo Gosudarstvennogo Universiteta. Seriya: Matematicheskoye Modelirovaniye i Programirovaniye*, vol. 18, no. 2, pp. 79–91, 2025.
- [2]. **M. A. Zaki**, S. Zai, U. Amjad, U. Zaki, and S. Narejo, "COMPACT CONVOLUTIONAL NEURAL NETWORK ARCHITECTURE FOR ONION DISEASE CLASSIFICATION USING CROP IMAGES", *AADM*, vol. 42, no. 3, pp. 253–271, Jan. 2025. **(ESCI)**
- [3]. A. Akhtar, I. Zafar, **M. A. Zaki**, U. Amjad, and M. Khurram, "Machine Learning-based fixed access network interface congestion prediction," *Pakistan Journal of Engineering Technology and Science (PJETS)*, vol. 12, no. 1, pp. 26–36, 2024. **(HEC Recognized Y Category)**
- [4]. A. K. Kazi, **M. A. Zaki**, M. A. Siddiqui, and A. S. Khan, "Fuzzy logic and neural network-based self-tuned PID controller of quadcopter," *Pakistan Journal of Engineering Technology and Science (PJETS)*, vol. 12, no. 1, pp. 49–63, 2024. **(HEC Recognized Y Category)**

- [5]. Z. Altaf, M. A. Unar, S. Narejo, **M. A. Zaki**, and N. U. Din, "Generalized Epileptic Seizure Prediction using Machine Learning Method," Int. J. Adv. Comput. Sci. Appl., vol. 14, no. 1, pp. 502–510, 2023. **(HEC Recognized Y Category)**
- [6]. **M. A. Zaki**, S. Narejo, M. Ahsan, S. Zai, M. R. Anjum, and N. U. Din, "Image-based Onion Disease (Purple Blotch) Detection using Deep Convolutional Neural Network," Int. J. Adv. Comput. Sci. Appl., vol. 12, no. 5, pp. 448–458, 2021. **(HEC Recognized Y Category)**
- [7]. **M. A. Zaki**, S. Narejo, S. Zai, U. Zaki, Z. Altaf, and N. U. Din, "Detection of nCoV-19 from Hybrid Dataset of CXR Images using Deep Convolutional Neural Network," Int. J. Adv. Comput. Sci. Appl., vol. 11, no. 12, pp. 699–707, 2020, doi: 10.14569/ijacsa.2020.0111281. **(HEC Recognized Y Category)**
- [8]. U. Zaki, **M. A. Zaki**, and R. A. Shah, "Harmful Effects of 5G on Life with Possible Solution," Glob. Sci. J., vol. 8, no. 5, pp. 1–13, 2020.
- [9]. **M. A. Zaki** and U. Zaki, "Challenges of English Text Recognition from Natural Scenes," Glob. Sci. J., vol. 8, no. 4, pp. 1045–1054, 2020.
- [10]. U. ZAKI, D. N. HAKRO, M. MEMON, F. H. KHOSO, K. U. R. KHOUMBATI, M. A. ZAKI, M. HAMEED, G. NABI, "Dataset of Urduud1k from Natural Scenes," SINDHUNIVERSITY Res. J., vol. 51, no. 04, pp. 595–600, 2019.
- [11]. **M. A. ZAKI**, S. ZAI, M. AHSAN, and U. ZAKI, "Development of an Android App for Text Detection," J. Theor. Appl. Inf. Technol., vol. 97, no. 20, pp. 2485–2496, 2019.
- [12]. **M. A. Zaki**, D. N. Hakro, M. Memon, U. Zaki, and M. Hameed, "Internet of Things Interface Using Augmented Reality an Interaction Paradigm using Augmented Reality," Univ. Sindh J. Inf. Commun. Technol., vol. 3, no. 3, pp. 135–140, 2019.
- [13]. U. Zaki, M. Memon, D. N. Hakro, K. U. R. Khoumbati, M. Hameed, **M. A. Zaki** and G. Nabi, "Implementation challenges in Information Retrieval System," SINDHUNIVERSITY Res. J., vol. 51, no. 2, pp. 339–344, 2019.
- [14]. U. Zaki, D. N. Hakro, K. Khoumbati, **M. A. Zaki**, and M. Hameed, "Issues & Challenges in Urdu OCR," Univ. Sindh J. Inf. Commun. Technol., vol. 3, no. 1, pp. 42–49, 2019.

Conference Papers

- [1]. U. Zaki, **M. A. Zaki**, and S. Narejo, "Chest X-Ray Image-based COVID-19 Recognition using Modified Artificial Neural Network," 3rd International Conference on Computational Sciences and Technologies, MUET Jamshoro, 2022.
- [2]. K. Mahar, S. Narejo, and **M. A. Zaki**, "Bitcoin price prediction using Deep Learning Algorithm," 2nd International Conference on Computational Sciences and Technologies, MUET Jamshoro, 2020, vol. 2, pp. 56–60, doi: 10.1109/MACS48846.2019.9024772.

Professional Memberships

Pakistan Engineering Council (January 2019 - Present)
Registration No. TELE/08092

Workshops

- Conducted a workshop on "**CPD Workshop on Mastering LaTeX for Thesis and Research Paper Writing**" in August 2024 organized by Department of Computer Systems Engineering, Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.
- Attended a workshop on **Network Simulator** in August 2018 at the Department of Telecommunication Engineering, Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.
- Attended a workshop on **LaTeX** in December 2017 at the Department of Telecommunication Engineering, Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.
- Attended a workshop on **Arduino** in March 2017 at the Department of Telecommunication Engineering, Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.
- Attended a seminar "**Huawei ICT Middle East Competition**" in August 2018 at the Department of Telecommunication Engineering, Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.

Conferences

- Attended 4th International Conference on Innovations in Computer Science (ICONICS'24) at NED University of Engineering & Technology, Karachi.

- Attended the QEC Training Program entitled "Taxation Rules and Filing Tax Returns" at NED University of Engineering & Technology, Karachi.
- Attended the QEC Training Program entitled "Teaching Case Studies" at NED University of Engineering & Technology, Karachi.
- Attended the Training Program entitled "Technical Computing using Matlab" at NED University of Engineering & Technology, Karachi.
- Attended 3rd International Conference on Innovations in Computer Science & Software Engineering (ICONICS'22) at NED University of Engineering & Technology, Karachi.
- Attended and presented paper 3rd International Conference on Computer Science & Technology in February 2022 at Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.
- Attended the 2nd International Conference on Computer Science & Technology in February 2021 at Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.
- Attended 1st International Conference on Computer Science & Technology in April 2019 at Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.
- Attended the 5th International Multi-Topic ICT Conference in April 2018 at Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan.

Technical & Personal Skills

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|---------------------------------|---------------------|------------------|
| • Anaconda3 | • OptiSystem | • Arduino (IDE) |
| • Mathworks MATLAB and Simulink | • Proteus | • Android Studio |
| • HFSS | • Network Simulator | • Dreamweaver |
| • Adobe Photoshop | • JabRef | • CSS |
| • NI's Multisim | • Mendeley | • HTML |
| • Cisco Packet Tracer | • LaTeX | • Java Script |
| • Huawei eNSP | • Netbeans (IDE) | • Huawei NMS2000 |
| • WiTuners | • Eclipse (IDE) | |

Research Interests

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| • Signal and Image Processing | • 5G | • Metaverse |
| • Internet of Things | • Deep Learning | • Artificial Neural Networks |

Certificates & Training

- **DeepLearning.AI TensorFlow Developer Specialization (07/2023)**
 - Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning
Credential ID: E8PVKU7YGVK
 - Convolutional Neural Networks in TensorFlow
Credential ID: RD39MGTJEQ34
 - Natural Language Processing in TensorFlow
Credential ID: ZS8HRNR2SP4F
 - Sequences, Time Series and Prediction
Credential ID: XT59UKPTYSRC
- **Machine Learning Specialization (07/2023)**
 - Supervised Machine Learning: Regression and Classification
Credential ID: XMK4CWUT5RDC
 - Advanced Learning Algorithms
Credential ID: 869ACFJ7MBVD
 - Unsupervised Learning, Recommenders, Reinforcement Learning
Credential ID: Y6PD6UA53XKW
- **Data Science Specialization (07/2023)**
 - The Data Scientist's Toolbox
Credential ID: 5HSPUU47ZY79
 - Getting and Cleaning Data
Credential ID: NRAG557ANCU5
 - Exploratory Data Analysis
Credential ID: 4HPWQBJSLESP
 - Reproducible Research
Credential ID: XZAMG3CQD98P
- Statistical Inference
Credential ID: GAHHJDD5L5NM
- Regression Models
Credential ID: 7WZ48GJWREBR
- Practical Machine Learning
Credential ID: YAQW7XNM7TKD
- Data Science Capstone
Credential ID: ZB663EFN8Y37
- Generative AI Application Developer (10/2024)
- Data Science & Machine Learning (10/2024)
- Deep Learning with PyTorch: Image Segmentation (5/2024)
Credential ID: O3TD3UCGZDN7
- Introduction to Embedded Machine Learning (07/2023)
Credential ID: UVLQRH8DSLBG
- Artificial Intelligence (Deep Learning & Computer Vision focused) (05/2023)

- **Automobile Hacking and Security v1.0 (11/2022)**
Credential ID: UC-c82a4022-7227-4393-a4b9-b128820022ed
- **Computer Hacking Forensic Investigator (09/2021)**
Credential ID: ECC4183652907
- **Structuring Machine Learning Projects (07/2020)**
Credential ID: 5HXB5QZ289UV
- **Technical Support Fundamentals (06/2020)**
Credential ID: AXP95GWJFYHX
- **Cloud Computing Basics (Cloud 101) (05/2020)**
Credential ID: NPBFT4W3HXU
- **Support Vector Machines in Python (05/2020)**

Credential ID: UC-ca18fdb8-a3dd-4ff9-b58a-a83b67416760

- **Artificial Neural Networks using Keras and Tensorflow in Python (04/2020)**
Credential ID: UC-e400925b-0117-4928-83ac-e1202c3f4478
- **RF & Core Network Training Boot Camp (12/2017)**
- **Microsoft Office Specialist (11/2017)**
Credential ID: wxcFb-22LV
- **Professional Development Training (08/2017)**
- **Fiber Optics Hands-on Training (12/2016)**
- **Web Development (03/2016)**

Courses Taught

- Image Processing & Computer Vision (Postgraduate level course)
- Tools & Techniques for Data Science (Postgraduate level course)
- Artificial Intelligence & Computer Architecture (Postgraduate level course)
- Programming Languages (Undergraduate level course)
- Object Oriented Programming (Undergraduate level course)
- Web Engineering (Undergraduate level course)
- Introduction to Computer Application (Undergraduate level course)
- Fundamental of Information Technology (Undergraduate level course)
- Artificial Intelligence & Expert System (Undergraduate level course)
- Computer Communication Networks (Undergraduate level course)

Languages

✓ English (Full Professional Proficiency)

✓ Urdu (Native or Bilingual Proficiency)

References

References are available on request.