MOBEEN UR REHMAN

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Abu Dhabi, United Arab Emirates

Professional Summary

- Ph.D. in Electronics and Information Engineering with extensive expertise in **Machine Learning, Deep Learning**, and **Pattern Recognition**.
- Proven success in developing **AI-driven Models** for autonomous systems, precision agriculture, image enhancement, medical diagnostics and bioinformatics.
- Strong track record of publishing impactful research in **High-impact Journals** and presenting at reputed conferences.
- Successfully led and delivered **Funded Research Projects**, showcasing strong project management and leadership skills.
- Awarded the **JIANT Fellowship Award** for excellent research by Brain Korea, National Research Foundation, South Korea, for 3 consecutive years (2020-2022).
- Committed to driving innovation through the integration of AI in academic and industrial applications.

Experience

- **United Arab Emirates University** *Aug 2025 - Present*
  Assistant Professor Abu Dhabi, United Arab Emirates
  - Assistant Professor with College of Information Technology, United Arab Emirates University.
- **Khalifa University** *Sep 2023 - Aug 2025*
  Post-Doctoral Fellow Abu Dhabi, United Arab Emirates
  - Post-Doctoral Fellow with Khalifa University Center for Autonomous Robotic Systems. Working on different funded research projects related to Artificial Intelligence.
- **Jeonbuk National University** *March 2023 - Sep 2023*
  Post-Doctoral Fellow Jeonju-si, South Korea
  - Brain Korea Post Doctoral Researcher with National Research Foundation of Korea. Working on different funded research projects related to Artificial Intelligence. In addition to my research responsibilities, I have also taken on a teaching role, where I taught a course (AI for Bioinformatics) to the master students.
- **Jeonbuk National University** *March 2020 - Feb 2023*
  Ph.D. Research Scholar Jeonju-si, South Korea
  - Worked on different research projects related to Bioinformatics and Artificial Intelligence. In 2022, I had the privilege of serving as a visiting instructor for undergraduate students, teaching courses on Pattern Recognition and Deep Neural Networks over two semesters.
- **Air University** *Sep 2018 - Feb 2020*
  Research Associate Islamabad, Pakistan
  - Worked on HEC Funded project "End to End Secure Voice Communication Over Voice Channel"
- **Air University** *Sep 2019 - Dec 2019*
  Visiting Faculty Member (Lecturer) Islamabad, Pakistan
  - Taught Object Oriented Programming and Digital Logic Design to Undergraduate Students.
- **Air University** *Sep 2017 - Sep 2018*
  Research Assistant Islamabad, Pakistan
  - Worked on HEC Funded project "End to End Secure Voice Communication Over Voice Channel"

Education

- **Jeonbuk National University** *March 2020 - Feb 2023*
  PhD in Electronics and Information Engineering (Artificial Intelligence) Jeonju, South Korea
  - **Research Title:** Artificial Intelligence Platform for In Silico Prediction and Integrative Analysis of Epigenetic Modifications.
- **Air University** *Sep 2017 - July 2019*
  Masters in Avionics Engineering Islamabad, Pakistan
  - **Research Title:** Reduced Feature Vector for Mitosis Detection in Breast Cancer Using Histology Images.
- **Bahria University** *Sep 2013 - June 2017*
  Bachelors in Electrical Engineering Islamabad, Pakistan
  - **Research Title:** Mitosis Detection in Breast Cancer by Inference of Segmentation and Bag of Features.

Funded Research Projects

- **ReefAI: Leveraging AI and Vision-Language Models for Coral Health Assessment** *2025-2026*
  Funded by EAD and UAEU (Grant No. G00005435)
  ◦ Role: Principal Investigator (**PI**)
  ◦ Status: Ongoing
- **Precision Agriculture** *2023 - 2023*
  Funded by: The Peach (Korean Company)
  ◦ Role: Principal Investigator (**PI**) of the project
  ◦ Status: Project deliverables delivered
- **Accurate Retinal Vessel Segmentation** *2022 - 2023*
  Funded by: ETRI Korea
  ◦ Role: Co-Principal Investigator (**Co-PI**)
  ◦ Status: Project deliverables delivered
- **AI-Powered Epigenetic Analysis** *2020 - 2023*
  Funded by: NRF Korea (Grant No. 2020R1A2C2005612)
  ◦ Role: Team Lead and Co-Principal Investigator (**Co-PI**)
  ◦ Status: Project deliverables delivered
- **Multi-Defect Segmentation in Electroluminescence Images** *2023 - 2023*
  Funded by: Korea Institute of Energy Technology Evaluation and Planning (KETEP)
  ◦ Role: **Key Researcher**
  ◦ Status: Project deliverables delivered
- **Advancements in Brain Tumor Segmentation from Multi-Modal MRI Images** *2021 - 2022*
  Funded by: JBNU Korea
  ◦ Role: Co-Principal Investigator (**Co-PI**)
  ◦ Status: Project deliverables delivered
- **Blind Image Quality Assessment** *2022 - 2022*
  Funded by: JBNU Korea
  ◦ Role: Co-Principal Investigator (**Co-PI**)
  ◦ Status: Project deliverables delivered

Honors and Awards

- **Presidential award** for excellence in research during Ph.D.
- **JIANT Fellowship Award** in recognition of excellent research from Brain Korea, National Research Foundation, South Korea, for 3 consecutive years (2020-2022)
- Multiple **Travel Grants** by National Research Foundation Korea
- Multiple **Research Incentives** for Best Research Paper publication by JBNU
- **JIANT IT scholarship** for Ph.D. studies
- **Merit scholarships** during MSc for excellent academic performance
- Research **Travel Award** 2017 (HEC Pakistan)
- **Best Paper Award**, ICEI 2018
- **Best Paper Award**, CSCI 2017

Patent

- Method and System for Predicting N4-Methyldioscin Variants, South Korea **Patent No. 10-2878733**, Registered: Oct 27, 2025

Conferences and Presentations

- Presented paper in CSCI (IEEE), 2017, Las Vegas, USA **(BEST PAPER AWARD)**
- Presented paper in ICOMET (IEEE), IBA Sukkur, Pakistan
- Presented 2 papers in ICEI-2018 (IEEE), Bangkok, Thailand **(BEST PAPER AWARD)**
- Presented 2 papers in AICAI'19 (IEEE), Academic City, Dubai
- Attended International Photovoltaic Science and Engineering Conference, 2020, Jeju, South Korea
- Attended 23rd Annual Meeting of the Korean Society for Brain and Neural Sciences, 2020, Seoul, South Korea
- Presented paper in ICCAS (IEEE), 2021, Jeju, South Korea
- Attended CICS (ICROS), 2022, Pyeongchang-gun, Gangwon-do, South Korea
- Presented paper in ICCAS (IEEE), 2022, Busan, South Korea
- Presented 2 papers in BIBM (IEEE), 2022, Las Vegas, USA
- Presented paper in eIT (IEEE), 2023, Chicago, USA

Category	Top 1% - 5%	Top 6% - 10%	Top 11% - 25%	Top 26% - 50%	Google Scholar Metrics
Publications	7	17	7	6	H-index: 22, Citations: 1540+, i-index: 34

Journal Publications

2026

- **Mobeen Ur Rehman**, Zeeshan Abbas, M.Fahad Nasir and Irfan Hussain. "A multiscale physics-informed framework for robust no-reference underwater image quality evaluation." Alexandria Engineering Journal (2026). **[IF: 6.8]**
- M.Fahad Nasir, **Mobeen Ur Rehman** and Irfan Hussain. "Vision-language models for zero-shot weed detection and visual reasoning in UAV-based precision agriculture." Frontiers in Plant Science (2026). **[IF: 4.8]**

2025

- M.Fahad Nasir, **Mobeen Ur Rehman** and Irfan Hussain. "A self-attention guided approach for advanced underwater image super-resolution with depth awareness." IEEE Open Journal of the Computer Society (2025). **[IF: 8.3**
- **Mobeen Ur Rehman**, Zeeshan Abbas, Farman Ullah and Irfan Hussain. "AttnW2V-Enhancer: Leveraging attention and Word2Vec for enhanced enhancer prediction." Computational and Structural Biotechnology Journal (2025). **[IF: 4.1**
- Naqash Afzal, **Mobeen Ur Rehman**, Lakmal Seneviratne, and Irfan Hussain. "The Convergence of AI and Animal-Inspired Robots for Ecological Conservation." Ecological Informatics (2025). **[IF: 5.9]**
- Maryam, **Mobeen Ur Rehman**, Kil to Chong, and Hilal Tayara"Drugs inhibition prediction in P-gp enzyme: a comparative study of machine learning and graph neural network." *Computational Toxicology* (2025): 100344. **[IF: 3.1]**
- Wilayat Khan, Taimur Hassan, **Mobeen Ur Rehman**, Mohammad Alsaffar, and Irfan Hussain"Multiscale convolutional transformer for robust detection of aquaculture defects." *Expert Systems with Applications* (2025): 126820. **[IF: 7.5]**

2024

- **Mobeen Ur Rehman**, Hassan Eesaar, Zeeshan Abbas, Lakmal Seneviatne, Irfan Hussain and Kil To Chong"Advanced drone-based weed detection using feature-enriched deep learning approach." *Knowledge-Based Systems* (2024): 112655. **[IF: 7.2]**
- **Mobeen Ur Rehman**, Imran Fareed Nizami, Farman Ullah, and Irfan Hussain. "IQA Vision Transformed: A Survey of Transformer Architectures in Perceptual Image Quality Assessment." *IEEE Access* (2024). **[IF: 3.4]**
- **Mobeen Ur Rehman**, Imran Fareed Nizami, Muhammad Majid, Farman Ullah, Irfan Hussain, and Kil To Chong. "CN-BSRIQA: Cascaded network - blind super-resolution image quality assessment." *Alexandria Engineering Journal* 91 (2024): 580-591. **[IF: 6.8]**
- Maryam, **Mobeen Ur Rehman**, Hilal Tayara, Irfan Hussain, and Kil To Chong. "A graph neural network approach for predicting drug susceptibility in the human microbiome." *Computers in Biology and Medicine* 179 (2024): 108729. **[IF: 7.7]**
- AbuAli Najah, Muhammad Bilal Khan, Farman Ullah, Mohammad Hayajneh, Mohammed Hussain, **Mobeen Ur Rehman**, and Kil To Chong. "Software Defined Radio Based Sensing for Breathing Monitoring: Design, Challenges, and Performance Evaluation." *IEEE Sensors Journal* **[IF: 6.8]**
- Abbas Zeeshan, **Mobeen Ur Rehman**, Hilal Tayara, Seung Won Lee, and Kil To Chong. "m5C-Seq: Machine learning-enhanced profiling of RNA 5-methylcytosine modifications." *Computers in Biology and Medicine* 182 (2024): 109087. **[IF: 7.7]**

2023

- Abbas Zeeshan, **Mobeen Ur Rehman**, Hilal Tayara, and Kil To Chong. "ORI-Explorer: a unified cell-specific tool for origin of replication sites prediction by feature fusion." *Bioinformatics* 39, no. 11 (2023): btad664. **[IF: 5.8]**
- Abbas Zeeshan, **Mobeen ur Rehman**, Hilal Tayara and Kil To Chong. "XGBoost Framework with Feature Selection for the Prediction of RNA N5-methylcytosine sites." *Molecular Therapy* (2023). **[IF: 12.4]**
- Ryu Jihyoung, **Mobeen Ur Rehman**, Imran Fareed Nizami, and Kil To Chong. "SegR-Net: A deep learning framework with multi-scale feature fusion for robust retinal vessel segmentation." *Computers in Biology and Medicine* (2023): 107132. **[IF: 7.7]**
- Park Sehi, **Mobeen Ur Rehman**, Farman Ullah, Hilal Tayara, and Kil To Chong. "iCpG-Pos: an accurate computational approach for identification of CpG sites using positional features on single-cell whole genome sequence data." *Bioinformatics* 39, no. 8 (2023): btad474. **[IF: 5.8]**
- Mir Bilal Ahmad, **Mobeen Ur Rehman**, Hilal Tayara, and Kil To Chong. "Improving Enhancer Identification with a Multi-Classifier Stacked Ensemble Model." *Journal of Molecular Biology* 435, no. 23 (2023): 168314. **[IF: 5.6]**
- Eesaar Hassan, Sungjin Joe, **Mobeen Ur Rehman**, Yeongmin Jang, and Kil To Chong. "SEiPV-Net: An Efficient Deep Learning Framework for Autonomous Multi-Defect Segmentation in Electroluminescence Images of Solar Photovoltaic Modules." *Energies* 16, no. 23 (2023): 7726. **[IF: 3.2]**
- Khan Muhammad Bilal, Najah AbuAli, Mohammad Hayajneh, Farman Ullah, **Mobeen Ur Rehman**, and Kil To Chong. "Software defined radio frequency sensing framework for intelligent monitoring of sleep apnea syndrome." *Methods* 218 (2023): 14-24. **[IF: 4.8]**
- Zafar Shakeel, Imran Fareed Nizami, **Mobeen Ur Rehman**, Muhammad Majid, and Jihyoung Ryu. "NISQE: Non-Intrusive Speech Quality Evaluator Based on Natural Statistics of Mean Subtracted Contrast Normalized Coefficients of Spectrogram." *Sensors* 23, no. 12 (2023): 5652. **[IF: 3.9]**
- Mustafa, Ali, Farman Ullah, **Mobeen Ur Rehman**, Muhammad Bilal Khan, Shujaat Ali Khan Tanoli, Muhammad Kaleem Ullah, Hamza Umar, and Kil To Chong. "Non-Intrusive RF sensing for early diagnosis of spinal curvature syndrome disorders." *Computers in Biology and Medicine* (2023): 106614. **[IF: 7.7]**

2022

- **Mobeen Ur Rehman**, Hilal Tayara, Quan Zou, and Kil To Chong. "i6mA-Caps: A CapsuleNet-based framework for identifying DNA N6-methyladenine sites." *Bioinformatics* 38, no. 16 (2022): 3885-3891. **[IF: 5.8]**
- **Mobeen Ur Rehman**, Hilal Tayara, and Kil To Chong. "DL-m6A: Identification of N6-methyladenosine Sites in Mammals using deep learning based on different encoding schemes." *IEEE/ACM Transactions on Computational Biology and Bioinformatics* (2022). **[IF: 3.6]**
- **Mobeen Ur Rehman**, Jihyoung Ryu, Imran Fareed Nizami and Kil To Chong "RAAGR2-Net: A brain tumor segmentation network using parallel processing of multiple spatial frames." *Computers in Biology and Medicine*, 106426 (2022). **[IF: 7.7]**
- **Mobeen Ur Rehman**, Suhail Akhtar, Muhammad Zakwan, and Muhammad Habib Mahmood. "Novel architecture with selected feature vector for effective classification of mitotic and non-mitotic cells in breast cancer histology images." *Biomedical Signal Processing and Control* 71 (2022): 103212. **[IF: 5.1]**
- Imran Fareed, **Mobeen Ur Rehman**, Asad Waqar, and Muhammad Majid. "Impact of visual saliency on multi-distorted blind image quality assessment using deep neural architecture." *Multimedia Tools and Applications* (2022): 1-18. **[IF: 3.6]**
- **Mobeen Ur Rehman**, Imran Fareed, and Muhammad Majid. "DeepRPN-BIQA: Deep architectures with region proposal network for natural-scene and screen-content blind image quality assessment." *Displays* 71 (2022): 102101. **[IF: 4.3]**
- Jaganathan Keerthana, **Mobeen Ur Rehman**, Hilal Tayara, and Kil To Chong. "XML-CIMT: explainable machine learning (XML) model for predicting chemical-induced mitochondrial toxicity." *International Journal of Molecular Sciences* 23, no. 24 (2022): 15655.**[IF: 4.9]**

2021

- **Mobeen Ur Rehman**, Kim Jee Hong, Hilal Tayara, and Kil to Chong. "m6A-NeuralTool: convolution neural tool for RNA N6-Methyladenosine site identification in different species." *IEEE Access* 9 (2021): 17779-17786. **[IF: 3.476]**
- **Mobeen Ur Rehman**, Hilal Tayara, and Kil To Chong. "DCNN-4mC: Densely connected neural network based N4-methylcytosine site prediction in multiple species." *Computational and structural biotechnology journal* 19 (2021): 6009-6019. **[IF: 6]**
- **Mobeen Ur Rehman**, Muhammad Adnan, Mouazma Batool, Liaqat Ali Khan, and Ammar Masood. "Effective Model for Real Time End to End Secure Communication Over GSM Voice Channel." *Wireless Personal Communications* 119, no. 2 (2021): 1643-1659. **[IF: 2.2]**
- Lim Dae Yeong, **Mobeen Ur Rehman**, and Kil To Chong. "iRG-4mC: neural network based tool for identification of DNA 4mC sites in rosaceae genome." *Symmetry* 13, no. 5 (2021): 899. **[IF: 2.7]**
- **Mobeen Ur Rehman**, SeungBin Cho, Jeehong Kim, and Kil To Chong. "Brainseg-net: Brain tumor MR image segmentation via enhanced encoder–decoder network." *Diagnostics* 11, no. 2 (2021): 169. **[IF: 3.6]**

2020

- Imran Fareed, **Mobeen Ur Rehman**, Muhammad Majid, and Syed Muhammad Anwar. "Natural scene statistics model independent no-reference image quality assessment using patch based discrete cosine transform." *Multimedia Tools and Applications* (2020): 1-20. **[IF: 3.6]**
- **Mobeen Ur Rehman** and Chong, Kil T. 2020. "DNA6mA-MINT: DNA-6mA Modification Identification Neural Tool." *Genes* 11, no. 8: 898. **[IF: 3.5]**
- **Mobeen Ur Rehman**, SeungBin Cho, Jee Hong Kim, and Kil To Chong. "BU-Net: Brain Tumor Segmentation Using Modified U-Net Architecture." *Electronics* 9, no. 12 (2020): 2203. **[IF: 2.9]**
- Nizami Imran Fareed, Muhammad Majid, **Mobeen Ur Rehman**, Syed Muhammad Anwar, Ammara Nasim, and Khawar Khurshid. "No-reference image quality assessment using bag-of-features with feature selection." *Multimedia Tools and Applications* (2020): 1-26. **[IF: 3.6]**

2019

- Abro Fauzia, Rauf Farzana, **Mobeen Ur Rehman**, Chowdhry Bhawani and Rajarajan, Muttukrishnan "Towards Security of GSM Voice Communication", *Wireless Personal Communications*, May-2019 **[IF: 2.2]**

Submitted Research

- Mobeen Ur Rehman, Ahsan Ahsan Bakht, Lakmal Seneviratne and Irfan Hussain "DeepAquaEnhance: Hierarchical Multi-head Attention and Adaptive Feature Integration for Underwater Image Enhancement" *IEEE Transactions on Circuits and Systems for Video Technology* **[IF: 8.3] (Manuscript Revised, Manuscript number: TCSVT-19536-2024)**
- Mobeen Ur Rehman, Ahsan Ahsan Bakht, Lakmal Seneviratne and Irfan Hussain "Efficient Diffusion Model using Physical Prior for Underwater Image Restoration", *IEEE Transaction on Multimedia* **(Manuscript Under Review)**
- Mobeen Ur Rehman, Fahad Nasir, Lakmal Seneviratne and Irfan Hussain "Spatial-Temporal Crop Fall Detection via Oriented Bounding Boxes and Vision-Language Models for Preemptive Agricultural Decision-Making", *ICCV* **(Manuscript Under Review)**
- Mobeen Ur Rehman, Muhammad Owais, Lakmal Seneviratne and Irfan Hussain "Exploring Recent Synergistic Deep Learning Paradigm to Advance AI-Powered Robotic Vision in Dense Crop Analysis" *IEEE Transactions on Industrial Informatics* **[IF: 12.3] (Manuscript Under Review)**

SKILLS

Programming Languages: Python, Java, C++, SQL, JavaScript, Go, Bash, LaTeX
Machine Learning: Supervised & Unsupervised Learning, Reinforcement Learning (Q-Learning, DQN), Transfer Learning, Active Learning, Hyperparameter Tuning, Model Evaluation
Deep Learning: CNNs, GANs, VAEs, Diffusion Models, VLMs, LLMs, Transformers (BERT, GPT-4), Autoencoders
NLP: Text Classification, Word Embeddings, Sequence-to-Sequence Models, Transformers, Text Generation, Machine Translation
Bioinformatics Tools: BLAST, GATK, STAR, SAMtools, Biopython, MACS, RSeQC, FastQC, DeepGene, GenePattern, DeepVariant
AI Frameworks & Libraries: TensorFlow, Keras, PyTorch, Hugging Face, Scikit-learn, XGBoost, OpenCV, SpaCy, Pandas, NumPy
Development Tools: Jupyter, Visual Studio Code, PyCharm, Git, Linux, Conda, Unit Testing (PyTest), TensorBoard
Research & Communication: Academic Writing, Technical Documentation, Model Deployment (Flask, FastAPI), Model Interpretability (LIME, SHAP)

REFERENCES

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   Jeonbuk National University
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   Relationship: Ph.D. Supervisor

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   Research Scientist
   Bristol University
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   Relationship: Project Supervisor

3. **Dr. Keerthana Jaganathan**
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   Northumbria University
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   Relationship: Collaborator