Dr. Azhar Imran Mudassir, Ph.D.

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Biography

Dr. Azhar Imran is an Associate Professor at the Department of Computer Science, Beijing University of Technology (BJUT), China. With over 13 years of academic experience, he specializes in Artificial Intelligence, Data Science, and Machine Learning. He has published over 85 research articles in high-impact journals and conferences. He has delivered keynote speeches at prestigious international conferences, including ICBDDM-24, ICCTEC, CCET25, CVIT-24, ICDSP24, and CVIT-23. As a Senior Member of IEEE, Dr. Imran actively participates in academic committees and serves on the editorial boards of several high-impact journals.

Throughout his career, Dr. Imran has received numerous awards, including the Outstanding Graduate Award and Best Researcher Award from BJUT, as well as the Embassy Honored Award from the Pakistan Embassy in Beijing. He was also honored with the Excellent International Students Award by the Ministry of Education, China. His research bridges academic advancements with real-world applications, focusing on AI-driven solutions in healthcare and cybersecurity.

Employment History

2025/07/08 – · · · ·

Associate Professor Department of Computer Science, Beijing University of Technology, Beijing, China.

2021/08/16 – 2025/07/07

Assistant Professor. Department of Creative Technologies, Air University, Islamabad, Pakistan.

- **Taught undergraduate courses:** Software Requirement Engineering, Machine Learning; AI, Software Quality Assurance/Engineering, NLP, Object-Oriented Programming, Software Engineering, Software Risk Management, Computer Vision, Web Systems & Technologies, JAVA Programming, Software Project Management.
- **Taught graduate courses:** Research Methodology (Fall 2021, Spring 2022), Advanced Machine Learning (Spring 2022), Tools and Techniques in Data Science (Fall 2021), Advanced Software Engineering (Fall 2022), Machine Learning (Fall 2022), Advanced Requirement Engineering (Spring 2023), Bioinformatics (Spring 2023).
- **Extra duties:** Incharge Examination, President Event Organizer, Member of Software Lab, Vice President of Research & Co-curricular Activities, Member of Course Curriculum Committee, Member of Admission Committee, Incharge Events.

2017/09/03 – 2021/07/31

Research Associate. School of International Education, Beijing University of Technology, China.

- Conducted research in machine learning, deep learning, and medical image analysis.

Employment History (continued)

2015/07/15 – 2017/08/31 **Lecturer.** Department of Computer Science & IT, University of Sargodha, Main Campus, Sargodha, Pakistan.

- Delivered lectures and managed academic activities in computer science and IT courses.

2013/11/04 – 2015/07/14 **Lecturer.** Department of Computer Science & IT, University of Sargodha, MBD Campus, Pakistan.

- Taught computer science and IT courses and supported curriculum development.

2012/10/08 – 2013/11/01 **Lecturer.** Newports Institute of Communication & Economics, Malir Campus, Karachi, Pakistan.

- Delivered lectures and contributed to academic program development.

Managerial Experience

2021 – 2024 **Program Lead (AI)**
Air University, Islamabad

2022 – 2025 **Graduate Advisor (MS/PhD Program)**
Faculty of Computing & AI, Air University, Islamabad, Pakistan

Education

2017 – 2021 **Ph.D., Software Engineering** from Beijing University of Technology.
Thesis title: *Analysis of Machine Learning Algorithms for Detection and Grading of Cataract Based on Retinal Fundus Images.*

2014 – 2017 **M.S. Computer Science** from University of Sargodha.
Thesis title: *Quantitative Offensiveness Prediction using Text Mining of Twitter Data.*
CGPA: 3.89/4.0, **Gold Medalist.**

2008 – 2012 **B.S. Software Engineering** from University of Sargodha.
CGPA: 3.4/4.0, **Bronze Medalist.**

Research Publications

Journal Articles

1. H. M. U. Ali, Q. Farooq, A. Imran, and K. El Hindi, "A systematic literature review on sentiment analysis techniques, challenges, and future trends," *Knowledge and Information Systems*, pp. 1–68, 2025.
2. M. O. Cheema, Z. M. U. Din, A. Imran, *et al.*, "Electrohysterogram data augmentation using generative adversarial network for pregnancy outcome prediction," *IEEE Access*, 2025.
3. A. Ikram and A. Imran, "Resvit fusionnet model: An explainable ai-driven approach for automated grading of diabetic retinopathy in retinal images," *Computers in Biology and Medicine*, vol. 186, p. 109 656, 2025.
4. A. Imran, J. Li, and A. Alshammari, "Ai-driven educational transformation in ict: Improving adaptability, sentiment, and academic performance with advanced machine learning," *PLoS One*, vol. 20, no. 5, e0317519, 2025.

5 A. Ishtiaq, J. Z. Gul, Z. M. U. Din, A. Imran, and K. El Hindi, "Wearable regionally trained ai-enabled bruxism-detection system," *IEEE Access*, 2025.

6 T. Kanwal, S. U. Rehman, A. Imran, and H. A. Mahmoud, "Energy-efficient internet of things-based wireless sensor network for autonomous data validation for environmental monitoring.," *Computer Systems Science & Engineering*, vol. 49, 2025.

7 M. S. Shahid and A. Imran, "Breast cancer detection using deep learning techniques: Challenges and future directions," *Multimedia Tools and Applications*, vol. 84, no. 6, pp. 3257–3304, 2025.

8 W. Younas, R. Chen, J. Zhao, T. Iqbal, M. Sharaf, and A. Imran, "Spert: Reinforcement learning-enhanced transformer model for agile story point estimation," *International Journal of Software Engineering and Knowledge Engineering*, vol. 35, no. 03, pp. 293–325, 2025.

9 D. S. Bhatti, S. Saleem, A. Imran, H. J. Kim, K.-I. Kim, and K.-C. Lee, "Detection and isolation of wormhole nodes in wireless ad hoc networks based on post-wormhole actions," *Scientific Reports*, vol. 14, no. 1, p. 3428, 2024.

10 A. Bilal, A. Imran, T. I. Baig, X. Liu, E. Abouel Nasr, and H. Long, "Breast cancer diagnosis using support vector machine optimized by improved quantum inspired grey wolf optimization," *Scientific Reports*, vol. 14, no. 1, p. 10 714, 2024.

11 A. Bilal, A. Imran, T. I. Baig, *et al.*, "Deepsvdnet: A deep learning-based approach for detecting and classifying vision-threatening diabetic retinopathy in retinal fundus images," *Computer Systems Science and Engineering*, vol. 48, no. 2, pp. 511–528, 2024.

12 A. Bilal, A. Imran, T. I. Baig, *et al.*, "Improved support vector machine based on cnn-svd for vision-threatening diabetic retinopathy detection and classification," *Plos one*, vol. 19, no. 1, e0295951, 2024.

13 A. Bilal, A. Imran, X. Liu, *et al.*, "Bc-qnet: A quantum-infused elm model for breast cancer diagnosis," *Computers in Biology and Medicine*, vol. 175, p. 108 483, 2024.

14 S. T. Haider, W. Ge, J. Li, *et al.*, "An ensemble machine learning framework for cotton crop yield prediction using weather parameters: A case study of pakistan," *IEEE Access*, 2024.

15 M. U. Hashmi, A. Imran, A. Bilal, M. Garayev, H. Fathi, and S. Dhelim, "Resource-limited skew estimation and correction (rlsec) for edge devices in delay non-tolerant networks," *IEEE Access*, 2024.

16 A. Hassan, A. Imran, A. U. Yasin, M. A. Waqas, and R. Fazal, "A multimodal approach for alzheimer's disease detection and classification using deep learning," *Journal of Computing & Biomedical Informatics*, vol. 6, no. 02, pp. 441–450, 2024.

17 I. Ihsan, A. Imran, T. Sher, M. B. A. Al-Rawi, M. El-Meligy, and M. S. Pathan, "Graph based covid-19 detection using conditional generative adversarial network," *IEEE Access*, 2024.

18 A. Ikram, A. Imran, J. Li, *et al.*, "A systematic review on fundus image-based diabetic retinopathy detection and grading: Current status and future directions," *IEEE Access*, 2024.

19 A. Q. Khan, G. Sun, M. Khalid, *et al.*, "A novel fusion of genetic grey wolf optimization and kernel extreme learning machines for precise diabetic eye disease classification," *Plos one*, vol. 19, no. 5, e0303094, 2024.

20 S. Latif, M. S. B. Ilyas, A. Imran, H. A. Abosaq, A. Alzubaidi, and V. Karovic Jr, "Machine learning empowered security and privacy architecture for iot networks with the integration of blockchain," *Intelligent Automation & Soft Computing*, vol. 39, no. 2, pp. 353–379, 2024.

21 H. A. Mahmoud, A. Imran, C. A. U. Hassan, and M. A. El-Meligy, "Optimizing accounting information systems with hybrid capsule network and honey badger particle swarm optimization," *IEEE Access*, vol. 12, pp. 153 346–153 359, 2024.

22 S. Shafiq, S. Latif, J. Ibrahim, *et al.*, "Optimizing video data security: A hybrid maes-ecc encryption technique for efficient internet transmission," *PloS one*, vol. 19, no. 11, e0311765, 2024.

23 K. M. A. Alheeti, A. A. A. Lateef, A. Alzahrani, A. Imran, and D. Al_Dosary, "Cloud intrusion detection system based on svm.," *International Journal of Interactive Mobile Technologies*, vol. 17, no. 11, 2023.

24 R. Asad, S. U. Rehman, A. Imran, J. Li, A. Almuhaimeed, and A. Alzahrani, "Computer-aided early melanoma brain-tumor detection using deep-learning approach," *Biomedicines*, vol. 11, no. 1, p. 184, 2023.

25 D. S. Bhatti, S. Saleem, A. Imran, H. Kim, and K.-I. Kim, "Daiwn: Detection and isolation of wormhole nodes in wireless ad hoc networks," 2023.

26 A. Hafeez, T. Ali, A. Nawaz, *et al.*, "Addressing imbalance problem for multi label classification of scholarly articles," *IEEE Access*, vol. 11, pp. 74 500–74 516, 2023.

27 B. Kanwal, S. U. Rehman, A. Imran, *et al.*, "Opinion mining from online travel reviews: An exploratory investigation on pakistan major online travel services using natural language processing," *IEEE Access*, vol. 11, pp. 29 934–29 945, 2023.

28 M. W. Karam, A. Imran, A. H. Khan, and S. Idrees, "Navigating emotions across borders: Deep learning-driven location-informed sentiment analysis of twitter," *Lahore Garrison University Research Journal of Computer Science and Information Technology*, vol. 7, no. 3, 2023.

29 S. Latif, X. W. Fang, K. Arshid, A. Almuhaimeed, A. Imran, and M. Alghamdi, "Analysis of birth data using ensemble modeling techniques," *Applied Artificial Intelligence*, vol. 37, no. 1, p. 2 158 273, 2023.

30 M. R. R. Rana, S. U. Rehman, A. Nawaz, *et al.*, "Aspect-based sentiment analysis for social multimedia: A hybrid computational framework," *Computer Systems Science and Engineering*, vol. 46, no. 2, pp. 2415–2428, 2023.

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33 M. Z. Arshad, H. Rahman, J. Tariq, *et al.*, "Digital forensics analysis of iot nodes using machine learning," *Journal of Computing & Biomedical Informatics*, vol. 4, no. 01, pp. 1–12, 2022.

34 M. S. Baig, A. Imran, A. U. Yasin, A. H. Butt, and M. I. Khan, "Natural language to sql queries: A review," *International Journal of Innovations in Science Technology*, vol. 4, pp. 147–162, 2022.

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38 S. Iqbal, A. Imran, and M. Adnan, "Breast tumor detection using machine learning boosting classifiers," *Journal of Computing & Biomedical Informatics*, vol. 4, no. 01, pp. 118–131, 2022.

39 Z. Iqbal, A. Imran, A. Yasin, and A. Alvi, "Denial of service (dos) defences against adversarial attacks in iot smart home networks using machine learning methods," *NUST Journal of Engineering Sciences*, vol. 15, no. 1, pp. 18–25, 2022.

40 M. Jubeen, H. Rahman, A. U. Rahman, *et al.*, "An automatic breast cancer diagnostic system based on mammographic images using convolutional neural network classifier," *Journal of Computing & Biomedical Informatics*, vol. 4, no. 01, pp. 77–86, 2022.

41 J. Latif, S. Tu, C. Xiao, S. Ur Rehman, A. Imran, and Y. Latif, "Odgnet: A deep learning model for automated optic disc localization and glaucoma classification using fundus images," *SN Applied Sciences*, vol. 4, no. 4, p. 98, 2022.

42 R. Liu, S. Ali, S. F. Bilal, *et al.*, "An intelligent hybrid scheme for customer churn prediction integrating clustering and classification algorithms," *Applied Sciences*, vol. 12, no. 18, p. 9355, 2022.

43 Z. A. Malik, M. Siddiqui, A. Imran, A. U. Yasin, A. H. Butt, and Z. J. Paracha, "Performance evaluation of classification algorithms for intrusion detection on nsl-kdd using rapid miner," *International Journal of Innovations in Science & Technology*, vol. 4, no. 1, pp. 135–146, 2022.

44 I. Murtza, A. Saadia, R. Basri, A. Imran, A. Almuhaimeed, and A. Alzahrani, "Forex investment optimization using instantaneous stochastic gradient ascent—formulation of an adaptive machine learning approach," *Sustainability*, vol. 14, no. 22, p. 15 328, 2022.

45 H. Rahman, T. F. N. Bukht, A. Imran, J. Tariq, S. Tu, and A. Alzahrani, "A deep learning approach for liver and tumor segmentation in ct images using resunet," *Bioengineering*, vol. 9, no. 8, p. 368, 2022.

46 I. Ullah, A. Imran, A. Ashfaq, and M. Adnan, "Exploiting machine learning models for identification of heart diseases," *Journal of Computing & Biomedical Informatics*, vol. 3, no. 02, pp. 1–20, 2022.

47 A. Imran, J. Li, Y. Pei, F. Akhtar, T. Mahmood, and L. Zhang, "Fundus image-based cataract classification using a hybrid convolutional and recurrent neural network," *The visual computer*, vol. 37, no. 8, pp. 2407–2417, 2021.

48 I. Khan, M. Z. Siddique, A. U. R. Butt, A. I. Mudassir, M. A. Qadir, and S. Munir, "Towards skin cancer classification using machine learning and deep learning algorithms: A comparison," *International Journal of Innovations in Science & Technology*, vol. 3, pp. 110–118, 2021.

49 M. I. Khan, A. Imran, A. H. Butt, A. U. R. Butt, *et al.*, "Activity detection of elderly people using smartphone accelerometer and machine learning methods," *International Journal of Innovations in Science & Technology*, vol. 3, no. 4, pp. 186–197, 2021.

50 T. Mahmood, J. Li, Y. Pei, F. Akhtar, A. Imran, and M. Yaqub, "An automatic detection and localization of mammographic microcalcifications roi with multi-scale features using the radiomics analysis approach," *Cancers*, vol. 13, no. 23, p. 5916, 2021.

51 F. Akhtar, J. Li, Y. Pei, *et al.*, "Diagnosis of large-for-gestational-age infants using a semi-supervised feature learned from expert and data," *Multimedia Tools and Applications*, vol. 79, no. 45, pp. 34 047–34 077, 2020.

52 A. Imran, J. Li, Y. Pei, F. Akhtar, J.-J. Yang, and Y. Dang, "Automated identification of cataract severity using retinal fundus images," *Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization*, vol. 8, no. 6, pp. 691–698, 2020.

53 U. Khan, Z. Y. An, and A. Imran, "A blockchain ethereum technology-enabled digital content: Development of trading and sharing economy data," *IEEE access*, vol. 8, pp. 217 045–217 056, 2020.

54 J. Latif, C. Xiao, S. Tu, S. U. Rehman, A. Imran, and A. Bilal, "Implementation and use of disease diagnosis systems for electronic medical records based on machine learning: A complete review," *IEEE Access*, vol. 8, pp. 150 489–150 513, 2020.

55 T. Mahmood, F. Akhtar, K. U. Rehman, M. Azeem, A. I. Mudassir, and S. M. Daudpota, "Introducing robustness in dbr routing protocol," *International Journal of Communication Networks and Distributed Systems*, vol. 24, no. 3, pp. 316–338, 2020.

56 T. Mahmood, J. Li, Y. Pei, F. Akhtar, A. Imran, and K. U. Rehman, "A brief survey on breast cancer diagnostic with deep learning schemes using multi-image modalities," *IEEe Access*, vol. 8, pp. 165 779–165 809, 2020.

57 F. Akhtar, J. Li, Y. Pei, *et al.*, "Diagnosis and prediction of large-for-gestational-age fetus using the stacked generalization method," *Applied Sciences*, vol. 9, no. 20, p. 4317, 2019.

58 A. Imran, J. Li, Y. Pei, J.-J. Yang, and Q. Wang, "Comparative analysis of vessel segmentation techniques in retinal images," *IEEE Access*, vol. 7, pp. 114 862–114 887, 2019.

59 F. M. M. Mokbal, W. Dan, A. Imran, L. Jiuchuan, F. Akhtar, and W. Xiaoxi, "Mlpxss: An integrated xss-based attack detection scheme in web applications using multilayer perceptron technique," *IEEE Access*, vol. 7, pp. 100 567–100 580, 2019.

60 Y. Wang, J. Li, S. Hongbo, Y. Li, F. Akhtar, and A. Imran, "A survey on vv&a of large-scale simulations," *International Journal of Crowd Science*, vol. 3, no. 1, pp. 63–86, 2019.

61 A. Imran, M. Faiyaz, and F. Akhtar, "An enhanced approach for quantitative prediction of personality in facebook posts," *International Journal of Education and Management Engineering (IJEME)*, vol. 8, no. 2, pp. 8–19, 2018.

62 A. Imran, W. Aslam, and M. Ullah, "Quantitative prediction of offensiveness using text mining of twitter data," *Sindh University Research Journal-SURJ (Science Series)*, vol. 49, no. 1, 2017.

Conference Proceedings

1 A. Ikram and A. Imran, "Automated diabetic retinopathy detection with fastdrnet on oct imaging," in *2025 International Conference on Emerging Technologies in Electronics, Computing, and Communication (ICETECC)*, IEEE, 2025, pp. 1–6.

2 A. Abbas, A. Alzahrani, A. Imran, A. Almuhaimeed, and A. H. Khan, "A transfer learning based detection and grading of cataract using fundus images," in *2023 25th International Multitopic Conference (INMIC)*, IEEE, 2023, pp. 1–6.

3 A. Ikram and A. Imran, "Review on detection and classification of diabetic retinopathy using fundus images," in *2023 17th International Conference on Open Source Systems and Technologies (ICOSST)*, IEEE, 2023, pp. 1–5.

4 A. Imran, K. M. A. Alheeti, A. Alzahrani, and M. I. Khan, "Sentiment analysis of movie reviews using improved word2vec and cnn," in *2023 20th International Bhurban Conference on Applied Sciences and Technology (IBCAST)*, IEEE, 2023, pp. 297–302.

5 A. Imran, M. Fahim, A. Alzahrani, S. Fahim, K. M. A. Alheeti, and S. U. Rehman, "Twitter sentimental analysis using machine learning approaches for semeval dataset," in *2023 1st International Conference on Advanced Innovations in Smart Cities (ICAISC)*, IEEE, 2023, pp. 1–6.

6 I. U. Khan, Z. A. Khan, M. Ahmad, *et al.*, "Machine learning techniques for permission-based malware detection in android applications," in *2023 9th International Conference on Information Technology Trends (ITT)*, IEEE, 2023, pp. 7–13.

7 A. Abbas, A. Imran, A. A. N. Al-Aloosy, S. Fahim, A. Alzahrani, and S. K. Muzaffar, "Heart failure prediction using machine learning approaches," in *2022 Mohammad Ali Jinnah University International Conference on Computing (MAJICC)*, IEEE, 2022, pp. 1–7.

8 A. Ashfaq, A. Imran, I. Ullah, A. Alzahrani, K. M. A. Alheeti, and A. Yasin, "Multi-model ensemble based approach for heart disease diagnosis," in *2022 International Conference on Recent Advances in Electrical Engineering & Computer Sciences (RAEE & CS)*, IEEE, 2022, pp. 1–8.

9 S. Fahim, A. Imran, A. Alzahrani, M. Fahim, K. M. A. Alheeti, and M. Alfateh, "Twitter sentiment analysis based public emotion detection using machine learning algorithms," in *2022 17th International Conference on Emerging Technologies (ICET)*, IEEE, 2022, pp. 107–112.

10 M. A. Hafeez, A. Imran, M. I. Khan, A. H. Khan, A. Nawaz, and S. Ahmed, "Diagnosis of liver disease induced by hepatitis virus using machine learning methods," in *2022 8th International Conference on Information Technology Trends (ITT)*, IEEE, 2022, pp. 154–159.

11 M. W. Karam, A. Imran, A. Alzahrani, K. M. A. Alheeti, A. Abbas, and A. A. N. Al-Aloosy, "Dramatic increase in fear-related discussion on twitter during covid-19: Analysis, topic modeling and tweets classification," in *2022 International Conference on Electrical Engineering and Sustainable Technologies (ICEEST)*, IEEE, 2022, pp. 1–8.

12 M. I. Khan, Z. A. Khan, A. Imran, A. H. Khan, and S. Ahmed, "Student performance prediction in secondary school education using machine learning," in *2022 8th International Conference on Information Technology Trends (ITT)*, IEEE, 2022, pp. 94–101.

13 F. Akhtar, J. Li, P. Yan, A. Imran, G. M. Shaikh, and C. Xu, "Exploiting ensemble classification schemes to improve prognosis process for large for gestational age fetus classification," in *2020 IEEE 44th Annual Computers, Software, and Applications Conference (COMPSAC)*, IEEE, 2020, pp. 1455–1459.

14 M. Z. Azeem, A. Imran, F. Akhtar, A. Wajahat, J. Latif, and S. A. Memon, "Effects of code cloning in mobile applications," in *2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET)*, IEEE, 2020, pp. 1–6.

15 M. Sohail, A. Imran, H. U. Rehman, and M. Salman, "Anti-social behavior detection in urdu language posts of social media," in *2020 3rd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET)*, IEEE, 2020, pp. 1–7.

16 T. Zhang, X. Zhu, Y. Liu, K. Zhang, and A. Imran, "Deep learning based classification for tomato diseases recognition," in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, vol. 474, 2020, p. 032 014.

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18 A. Imran, J. Li, Y. Pei, F. M. Mokbal, J.-J. Yang, and Q. Wang, "Enhanced intelligence using collective data augmentation for cnn based cataract detection," in *International Conference on Frontier Computing*, Springer Singapore Singapore, 2019, pp. 148–160.

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20 A. Wajahat, A. Imran, J. Latif, A. Nazir, and A. Bilal, "A novel approach of unprivileged keylogger detection," in *2019 2nd International Conference on Computing, Mathematics and Engineering Technologies (iCoMET)*, IEEE, 2019, pp. 1–6.

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23 J. Li, X. Xu, Y. Guan, *et al.*, "Automatic cataract diagnosis by image-based interpretability," in *2018 IEEE international conference on systems, man, and cybernetics (SMC)*, IEEE, 2018, pp. 3964–3969.

24 S. Ijaz, M. I. Lali, B. Shahzad, A. Imran, and S. Tiwana, "Biasness identification of talk show's host by using twitter data," in *2017 13th International Conference on Emerging Technologies (ICET)*, IEEE, 2017, pp. 1–6.

Books and Chapters

1. A. Bilal, G. Sun, S. Mazhar, and A. Imran, "Improved grey wolf optimization-based feature selection and classification using cnn for diabetic retinopathy detection," in *Evolutionary computing and mobile sustainable networks: proceedings of ICECMSN 2021*, Springer Singapore Singapore, 2022, pp. 1–14.

Students Supervised

PhD Students

- **Muhammad Imran Khan** (Reg. ID: 222638) - Proposal Defense Completed
  Title: Multimodal Data Fusion for Enhanced Parkinson's Disease Diagnosis
- **Amna Ikran** (Reg. ID: 222637) - Final Thesis Evaluation
  Title: AI-Enhanced Diagnosis of Diabetic Retinopathy: Fine-Tuned Classification through Advanced Fundus Image Analysis
- **Muhammad Shakeel** (Reg. ID: 230419) - Proposal Defense Completed
  Title: AI-Powered Smart Energy Grids: Enhancing Efficiency and Sustainability in Energy Distribution
- **Sadaf Abbasi** (Reg. ID: 232901) - Comprehensive Exam Completed
  Title: Multimodal IoT Sensor Integration for Non-Invasive Brain Tumor Diagnosis
- **Muhammad Sufiyan Khan** (Reg. ID: 232902) - Proposal Defense Completed
  Title: Automated Radiology Report Generation: A Deep Learning Approach to Streamline Medical Imaging Interpretation

MS/MPhil Students

- **Ahsan Abbas** (Reg. ID: 210161) - Final Defense Completed
  Title: Cataract Disease Classification using Transfer Learning and Few Shot Learning Based Fundus Image Segmentation
- **Safa Fahim** (Reg. ID: 211795) - Final Defense Completed
  Title: Retinal Fundus Images Based Diabetic Retinopathy Detection and Classification Using Deep Learning
- **Samia Khalood Muzaffar** (Reg. ID: 211804) - Final Defense Completed
  Title: Brain Tumor Detection and Segmentation using Deep Learning
- **Syed Haleemullah Shah** (Reg. ID: 211848) - Final Defense Completed
  Title: Anomaly detection in SQL injection and Cross-Site Scripting using NLP techniques
- **M. Mubashar Siddique** (Reg. ID: 210083) - Final Defense Completed
  Title: Analysis of Deep Learning Algorithms for Detection and Classification of Tomato Leaf Diseases
- **Muhammad Alfateh Murkaz** (Reg. ID: 211784) - Final Defense Completed
  Title: AI-Based Framework For Detecting Melanoma and Classification of Skin Lesion Using Deep Learning Techniques
- **Muhammad Waleed Karam** (Reg. ID: 211800) - Final Defense Completed
  Title: A Machine Learning Approach for Understanding and Classifying the Societal Emotions Surrounding the Russia-Ukraine War
- **Muhammad Saad Shahid** (Reg. ID: 222384) - Final Defense Completed
  Title: Deep Learning Based Segmentation and Classification of Breast Cancer Disease using Magnetic Resonance Imaging
- **Raja Umar Sultan** (Reg. ID: 222425) - Final Defense Completed
  Title: Elevating Software Requirements Elicitation with Intelligent Information Management and Machine Learning
- **Hammad Satti** (Reg. ID: 222409) - Final Defense Completed
  Title: Hybrid Deep Learning for Multimodal Breast Cancer Segmentation and Classification

Students Supervised (continued)

- **Muhammad Abdullah** (Reg. ID: 222393) - Final Defense Completed
  Title: Multimodal Transfer Learning Fusion for Diabetic Retinopathy Prediction Using OCT and Fundus Images
- **Muhammad Umair Arshad** (Reg. ID: 222406) - Final Defense Completed
  Title: Transparent Sentiment Analysis on Urdu Tweets: Emoticon-driven Multimodal Fusion with Explanations using XAI
- **Anum Munir** (Reg. ID: 222401) - Final Defense Completed
  Title: Detecting AI Generated Content: A Human vs Machine Analysis with Attention Mechanisms
- **Muhammad Shafqat Malik** (Reg. ID: 222399) - Final Defense Completed
  Title: A Study of Cardiovascular Disease Diagnoses Using Deep Learning From ECG Signals
- **Musa Raza Abidi** (Reg. ID: 230312) - Final Defense Completed
  Title: Deep Learning Based Automated Prostate Cancer Diagnosis using Histopathological Images and Gleason Score
- **Ali Hassan** (Reg. ID: 210106) - Final Defense Completed
  Title: Alzheimer's Disease Detection and Classification through Multi-Modality Imaging Fusion
- **Sabahat Fatima** (Reg. ID: 210103) - Final Defense Completed
  Title: Integrating Meteorological and Remote Sensing Data for Fog Prediction
- **Sawera Pervaiz** (Reg. ID: 230305) - Final Defense Completed
  Title: Automated Breast Cancer Classification of Histopathology Images using Deep Learning
- **Qurat Ul Ain** (Reg. ID: 232842) - Final Defense Completed
  Title: Enhancing Software Defect Predictions Using Machine Learning
- **Sitara Rafaqat** (Reg. ID: 232839) - Final Defense Completed
  Title: Software Defect Prediction in Deep Learning
- **Taimoor Hassan** (Reg. ID: 232806) - Final Defense Completed
  Title: Anomaly Detection through Reinforcement Learning in Closed-Loop Networks

Research Grants

- **Personality Prediction from Social Media Text Using NLP**
  Funding Body: Pakistan Science Foundation (PSF)
  Grant Amount: PKR 2,000,000
  Duration: March 2015 - March 2016
  Project Objectives: Use machine learning classifiers and NLP to predict personality traits from Facebook posts.

- **Team Muhafiz: Promoting Social Harmony through Comics**
  Funding Body: National Innovation Award Fund
  Grant Amount: PKR 1,500,000
  Duration: Aug 2021 - Aug 2022
  Project Objectives: Create comic books addressing social issues like deforestation, child marriages, and drug abuse, promoting harmony.

Research Grants (continued)

- **AI-Based Medical Imaging for Early Diagnosis of Cancer**
  Funding Body: Pakistan Medical Research Council (PMRC)
  Grant Amount: PKR 6,000,000
  Duration: Mar 2022 - Mar 2023
  Project Objectives: Develop an AI-powered system for analyzing medical imaging to detect early-stage cancer in X-rays and MRIs.

- **Predictive Analytics for Cardiac Disease Using Medical Imaging Data**
  Funding Body: National ICT R&D Fund, Pakistan
  Grant Amount: PKR 4,200,000
  Duration: Jan 2023 - Jan 2024
  Project Objectives: Apply machine learning models to medical imaging data to predict heart diseases like coronary artery disease using CT scans and echocardiograms.

- **Smart Health Monitoring System for Elderly Using Wearable Technology**
  Funding Body: Pakistan Science Foundation (PSF)-National Science Foundation China (NSFC)
  Grant Amount: $16,000
  Duration: Jan 2024 - Aug 2025
  Project Objectives: Design a smart health monitoring system that uses wearable sensors to track vitals and alert caregivers for elderly patients.

Skills

Programming Languages	Python, R, Java, MATLAB, C, SQL, XML/XSL, HTML/CSS, JavaScript, LaTeX.
Machine Learning & AI	Deep Learning (TensorFlow, Keras), Convolutional Neural Networks (CNN), Recurrent Neural Networks (RNN), Support Vector Machines (SVM), Random Forest, Gradient Boosting Machines (GBM), Natural Language Processing (NLP).
Data Science & Analytics	Statistical Analysis, Data Cleaning, Exploratory Data Analysis (EDA), Feature Engineering, Data Visualization (Matplotlib, Seaborn, Plotly), Time Series Analysis, Regression Models.
Tools & Technologies	PyCharm, Jupyter Notebook, RStudio, Visual Studio Code, TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, NumPy, OpenCV.
Databases	MySQL, PostgreSQL, SQLite, MongoDB, SQL Server.
Big Data & Cloud Computing	Apache Spark, Hadoop, AWS (S3, EC2, Lambda), Google Cloud (BigQuery), Docker, Kubernetes.
Web Development	HTML, CSS, JavaScript, Flask, Django, Apache Web Server.
Miscellaneous	Academic Research, Machine Learning Model Deployment, Data Preprocessing, Data Pipelines, Web Scraping, LaTeX typesetting and publishing, Git/GitHub.

Memberships

IEEE Senior Member	IEEE Senior Member- 94523492
IEEE Technical Committee	IEEE Member of Technical Committee on Computer Architecture (TCCA)

Memberships (continued)

IEEE Biometrics Council	IEEE Member of Biometrics Council
Elsevier Membership	Elsevier student membership
IEEE Councils	Member of IEEE Council on Superconductivity
IEEE Sensors Council	Member of IEEE Sensors Council

Certificates and Awards

Awards and Achievements

2021 **Outstanding Graduate Award**, Beijing University of Technology.

2020 **Excellent International Students Award**, Ministry of Education, China.

Best Researcher Award, Beijing University of Technology, China.

2019 **Best Researcher Award**, Beijing University of Technology, China.

Embassy Honored Award for Outstanding Students, Pakistan Embassy at Beijing, China.

2018 **Best Researcher Award**, Beijing University of Technology, China.

2017 **Ph.D. Fully Funded Scholarship Award**, Chinese Scholarship Council.

Certifications

2025 **Certificate of Participation**, Two-day Program organized by the Quality Assurance Agency (QAA), Higher Education Commission (HEC), in collaboration with Air University Islamabad.

2020 **Certificate of Achievement for Introduction to Physical Computing Course**, Lancaster University and Institute of Coding.

Certificate of Achievement for Introduction to Virtual, Augmented and Mixed Reality Course, Lancaster University and Institute of Coding.

Certificate of Achievement for Introduction to Creative AI Course, UAL Creative Computing Institute and Institute of Coding.

Certificate of Achievement for Essential Skills for Your Career Development Course, University of Leeds and Institute of Coding.

Certificate of Achievement for Learn to Code for the Web Course, University of Leeds and Institute of Coding.

Certificate of Achievement for Data Analytics for Decision Making: An Introduction to Using Excel Course, Bond University.

Web Design & Development Certification.

Chinese Language T3 Certification.

2019 **Master's Degree Gold Medalist**.

Bachelor's Degree Bronze Medalist.

Certificate of Country Representative of Cultural Day, Beijing University of Technology.

2018 **Certificate of Best Booth on 14th Cultural Event**, Beijing University of Technology.

2017 **Management Certificate of Cultural Event**, Beijing University of Technology.

2016 **Proctor of Microsoft Certifications**, University of Sargodha, Pakistan.

Microsoft Office Specialization.

Microsoft Specialization Course (MS Word).

Microsoft Specialization Course (MS Excel).

Microsoft Specialization Course (MS PowerPoint).

Certificates and Awards (continued)

- **Microsoft Specialization Course (MS OneNote)**.

2013
- **Time Topologies Certification**.
- **Educational Philosophies Certification**.

2012
- **Learning Strategies Certification**.

2005
- **WSPA Certification**.

Editorial Members and Reviewers

Editorial Services

- **Associate Editor**, IEEE Transactions on Technology and Society
  URL: `https://technologyandsociety.org/transactions/contact-transactions-on-ts/`

- **Associate Editor**, IEEE Data Descriptions
  URL: `https://www.ieee-data.org/editorial-board/`

- **Academic Editor**, PloSOne Journal
  URL: `https://journals.plos.org/plosone/static/editorial-board`

- **Section Editor**, CMC Journal
  URL: `https://www.techscience.com/cmc/special_detail/ophthalmic-diseases-diagnosis`

- **Session Editor**, International Journal of Ophthalmology & Visual Science
  URL: `https://www.sciencepublishinggroup.com/journal/special-issue/230004`

- **Section Editor**, Journal of Computing & Biomedical Informatics
  URL: `https://jcbi.org/index.php/Main/about/editorialTeam`

Reviewers Recognition

- IEEE Transactions on Cybernetics
- IEEE Transactions on Artificial Intelligence
- Computers in Biology & Medicine
- IEEE-Access
- IGI-Global International Journal of Big Data and Analytics in Healthcare (IJBDAH)
- Journal of Medical Internet Research (JMIR)
- MDPI Sensors, Applied Sciences, Diagnostics, Healthcare, Cancers
- International Journal of Computer Theory and Engineering
- Journal of Imaging
- Pattern Analysis and Applications
- Cognet Engineering
- Journal of Personalized Medicine
- Journal of Pharmaceutical Research International
- Multimedia Tools & Applications
- The Imaging Science Journal
- Computers, Materials & Continua (CMC) Journal

Editorial Members and Reviewers (continued)

- IGI Global
- IEEE Transactions on Medical Imaging

Conference Participation

2025

- **Invited Speaker**, IEEE 3rd International Conference on Big Data and Data Mining
  Hengyang, China, December 12th-14th, 2025.
  Talk Title: Harnessing Big Data and AI for Healthcare Innovation.

- **Invited Speaker and Session Chair**, IEEE 8th International Conference on Computer and Communication Engineering Technology
  Beijing, China, August 15th-17th, 2025.
  Talk Title: Multimodal Image Analysis for Breast Cancer Classification.

2024

- **Keynote Speaker**, IEEE 3rd International Conference on Big Data and Data Mining
  Talk Title: AI in Healthcare.

- **Seminar Speaker**, Pir Mehr Ali Shah Arid Agriculture University Rawalpindi
  January 16th, 2024.
  Seminar Title: Generative AI 2024: Shaping the Future of Innovation.

2023

- **Seminar Speaker**, International Islamic University Islamabad
  November 24th, 2023.
  Seminar Title: Current and Modern Research Trends.

- **Guest Speaker**, 5th International Conference of Computer Science and Allied Technology (ICCSAT-2023)
  Lahore Garrison University, November 22nd-23rd, 2023.
  Talk Title: Artificial Intelligence in Healthcare.

- **Keynote Speaker**, 25th International Multi-Topic Conference (INMIC)
  University of Central Punjab (UCP), Lahore, November 17th, 2023.
  Talk Title: Artificial Intelligence in Healthcare: The Hope, The Hype, and the Real-World Impact.

- **Session Chair**, 5th International Communication Engineering and Cloud Computing Conference (CECCC 2023)
  Nanjing, China, October 29th, 2023.
  Session Title: Communication Engineering and Cloud Computing.

- **Session Chair**, 6th International Conference on Sensors, Signal and Image Processing (SSIP2023)
  Nanjing, China, October 28th, 2023.
  Session Title: AI-Based Digital Signal/Image Processing Technology and Method.

Conference Participation (continued)

- **Session Chair**, 6th International Conference on Computer and Communication Engineering Technology (CCET 2023)
  Beijing, China, August 6th, 2023.
  Session Title: Signal Models and Intelligent Algorithms in Electronics and Information Technology.

- **Session Chair**, 4th International Conference on Computer Vision and Information Technology (CVIT 2023)
  Beijing, China, August 4th, 2023.
  Session Title: Computer Vision and Information Technology.

- **Seminar Speaker**, National University of Modern Languages (NUML)
  May 4th, 2023.
  Seminar Title: How to Publish in High Impact Factor Journals.

- **Keynote Speaker**, 1st International Conference IT Infrastructure and Computational Security (ITICS 2023)
  Lahore Garrison University (LGU), Lahore, Pakistan.
  Talk Title: Role of AI in Healthcare.

- **Invited Speaker**, International Conference on Computer and Communication Engineering Technology (CCET25)
  Talk Title: AI-Driven Innovations in Communication Systems and Technologies.

- **Invited Speaker**, International Conference on Big Data and Digital Media (ICBDDM-24)
  Talk Title: Emerging Trends in Artificial Intelligence and Machine Learning.

- **Invited Speaker**, International Conference on Computer Vision and Information Technology (CVIT-24)
  Talk Title: Advancements in Computer Vision: Applications in Healthcare and Security.

- **Invited Speaker**, International Conference on Digital Signal Processing (ICDSP24)
  Talk Title: AI and Machine Learning Techniques in Signal Processing.

2022

- **Guest Speaker**, International Multidisciplinary Research Conference (IMDRC-2022)
  Superior Campus Mandi Bahauddin, Pakistan.
  Talk Title: Computational Intelligence for Healthcare Informatics.

- **Keynote Speaker**, Global Multi-Disciplinary Research Conference (GMDRC-2022)
  Superior University Campus Mandi Bahauddin, Pakistan.
  Talk Title: Keynote Address on Healthcare Revolution.

- **Invited Speaker**, International Conference on Computer Vision and Information Technology (CVIT-23)
  Talk Title: Revolutionizing Image Processing with Deep Learning.

- **Invited Speaker**, International Conference on Computer and Communication Technology (IC-CTEC)
  Talk Title: Generative AI and its Impact on Modern Computing.

Conference Participation (continued)

2021 **Presented Poster**, International Conference on Aerospace Science & Engineering (ICASE-2021) Institute of Space Technology, Islamabad, Pakistan.
Poster Title: Rise of Educational Software and Impact of COVID-19 Outbreak in Pakistan.

References

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