

# DR. AHMED IQBAL

---

## PERSONAL INFORMATION

**Born:** 3<sup>rd</sup> Feb 1989, Pakistan

**Marital Status:** Married

**Languages:** Urdu, Hindi, English

**Mobile:** +974 51471441

**E-mail:** [ahmed.iqbal@ieee.org](mailto:ahmed.iqbal@ieee.org)

**Website:** [Ahmediqbal.com](http://Ahmediqbal.com)



**Google Scholar:** <https://scholar.google.com.pk/citations?hl=en&user=tqNZBnMAAAAJ>

**ResearchGate:** <https://www.researchgate.net/profile/Ahmed-Iqbal-3>

**LinkedIn:** <https://www.linkedin.com/in/ahmed-iqbal>

**GitHub:** <https://github.com/ahmedeqbal>

## BRIEF INTRODUCTION

Dr. Ahmed Iqbal is serving as Postdoctoral Fellow in Autism Sensing Center of Excellence (A-Sense) at Hamad Bin Khalifa University, Qatar, Doha. He also worked as Assistant Professor in Department of Computing at Sir Syed CASE Institute of Technology, Islamabad, Pakistan. Dr. Ahmed Iqbal completed his Ph.D. (CS), 2020-2023, from COMSATS University Islamabad, under the supervision of [Prof. Dr. Muhammad Sharif Malik](#). He has published his research works in Top Tier (Q1) Journals of the medical imaging field including Knowledge-Based Systems, Expert Systems with Applications, Engineering Applications of Artificial Intelligence, Journal of King Saud University - Computer and Information Sciences, Biomedical Signal Processing Control, Cognitive Computation, and Tuberculosis Journal, etc., and have an accumulated impact factor of more than 60+. His main research interests include Computer Vision, Medical Imaging, Deep Learning, Vision Transformers. He has published more than 5 source codes at [GitHub](#), and 3 datasets at Mendeley data repository. He is also serving as a reviewer of more than 40+ ISI indexed well-reputed Journals including IEEE Transactions on Neural Networks and Learning Systems, Journal of Biomedical and Health Informatics, Artificial Intelligence Review, Applied Soft Computing, Knowledge-Based Systems, and Engineering Applications of Artificial Intelligence. He is proficient in Python and MATLAB and has used various frameworks and tools such as PyTorch, TensorFlow, Open CV, and LaTeX.

## ACADEMIC QUALIFICATION

**Doctor of Philosophy in Computer Science, CGPA 3.84/4.0**

**Islamabad, Pakistan**

Computer Science Department, COMSATS University Islamabad (CUI)

2020 - 2023

**Thesis:** An Efficient Scheme for Segmentation and Classification of Breast Cancer Images

**Master of Science in Computer Science, CGPA 3.71/4.0**

**Lahore, Pakistan**

Faculty of Computer Science & Information Technology, Virtual University of Pakistan

2016 - 2019

**Thesis:** SDPM - An Effective Model for Software Defect Prediction using Artificial Neural Networks

## JOB EXPERIENCE

2024 - Present      **Postdoctoral Fellow, Autism Sensing Center of Excellence (A-Sense), Hamad Bin Khalifa University (HBKU), Doha, Qatar**

**Job description:** Currently working in Autism Sensing Center of Excellence (A-Sense), which is dedicated to advancing the remote observation and quantitative assessment of autistic children. The goal of this research center is to support early diagnosis, enable targeted intervention, and enhance educational outcomes.

---

2024 - Sept 2024      **Assistant Professor, Department of Computing, Sir Syed CASE Institute of Technology, Islamabad, Pakistan**

**Job description:** Teaching nine credit hours to undergraduate and graduate students. Supervising final-year Project, Thesis of undergraduate and graduate students. As software engineering cluster head, collaborating with faculty to design and update the curriculum to ensure it meets industry standards and educational goals.

---

2021 - 2023      **Research Associate, Predictive Analytics Lab under National Center for Big Data & Cloud Computing (NCBC), Pakistan**

**Job description:** National Center in Big Data and Cloud Computing (NCBC) aims to become the leading hub of innovation, scientific research, knowledge transfer to the local economy, and training in the area of data analytics, cloud computing, and data science. Under the NCBC umbrella, the Predictive Analytics Lab aims to identify factors of the child mortality rate in Sindh, Pakistan. Which factor influences lady health worker performance, and how to improve it. The primary task was to develop a deep learning-based Tuberculous detection solution for the Sindh healthcare department. The [porotype](#) idea is also published in Tuberculous Journal (<https://doi.org/10.1016/j.tube.2022.102234>). The proposed solution is developed in Django framework, PostgreSQL, Scikit-Learn, TensorFlow, and various supportive libraries.

---

2011 - 2019      **Web Application Developer, PakBase Technologies, Rawalpindi**

**Job description:** PakBase Technologies is a Pakistan-based leading web hosting company. Their primary objective is to provide services in Linux-based and windows-based servers. My task was to develop WordPress, Joomla, and Python Django-based web solutions. My notable project was to develop an MP3 Editor in a web-based Django project. All tasks were related to PHP, MySQL, SQLite, Python, and Django.

---

2009 - 2010      **Front-end Developer, Bir Al Sabia Technologies, Rawalpindi**

**Job description:** Bir Al Sabia Technologies is a leading Dubai-based IT company. Their primary objective is to provide services in web-based solutions and client management systems. My task was to develop a unique Front-end interface for the Taleem-e-Quran website, which provides Quran-teaching services to hundreds of overseas students. All tasks were related to Adobe Photoshop, HTML, CSS, JavaScript, PHP, and MySQL server.

## UNDERGRADUATE PROJECT SUPERVISED

### BS (CS) students

1. Asim Qamar (1880145), Muhammad Sayyam Khan (1880126), "Diagnosis of Tuberculosis by using Deep Learning Convolutional Neural Network", 2021, SZABIST University, Islamabad Campus.
2. Saqib Amin (1912273), Sajjad Karim (1912272), Zain Habib (1912283) "Diagnosis of Pneumonia by using DL CNN", 2023, SZABIST University, Islamabad Campus.

### BS (SE) students

3. Nauman Iftikhar (1812134), Hira Adnan (1812115), "A Robust Scheme for Detection of Lung Diseases Using Deep Learning", 2021, SZABIST University, Islamabad Campus.

## TEACHING INTERESTS

- Object Oriented Programming
- Cloud Computing
- Computer Vision
- Artificial Neural Networks
- Digital Logic Design
- Image Processing

## RESEARCH PUBLICATIONS

**h-index:** 17; **i10-index:** 21; **Citations:** 960+; **Impact Factor:** 60+

- [1] Muhammad Wajid, **Ahmed iqbal**, Isra Malik, Jawad Hussain, and Yasir Jan "A semi-supervised approach for breast tumor segmentation using sparse transformer attention UNet", Pattern Recognition Letters, Vol. 187, 2024 (**Impact Factor: 3.9**)
- [2] **Ahmed iqbal**, Muhammad Usman, Zohair Ahmed, and Isra Malik "Rethinking encoder-decoder architecture using Vision Transformer for colorectal polyp and surgical instruments segmentation," Engineering Applications of Artificial Intelligence, Vol. 136 - Part B, 2024 (**Impact Factor: 8.0**)
- [3] Isra Malik, Mussarat Yasmin, **Ahmed Iqbal**, Mudassar Raza, Chang-Jae Chun, and Mugahed A. Al-antari, "Hybrid fusion transfer learning-based diagnosis for knee osteoarthritis severity classification using ant colony optimization algorithm," Multimedia Tools and Applications, 2024 (**Impact Factor: 3.0**)
- [4] Isra Malik, **Ahmed Iqbal**, Yeong Hyeon Gu, and Mugahed A. Al-antari, "Deep Learning for Alzheimer's Disease Prediction: A Comprehensive Review," Diagnostics, Vol. 14, No. 12, 2024 (**Impact Factor: 3.0**)
- [5] **Ahmed iqbal**, Muhammad Sharif, "Memory-efficient transformer network with feature fusion for breast tumor segmentation and classification task," Engineering Applications of Artificial Intelligence, Vol. 127 - Part B, 2023 (**Impact Factor: 8.0**)
- [6] **Ahmed iqbal**, Muhammad Usman, Zohair Ahmed, "Tuberculosis chest X-ray detection using CNN-based hybrid segmentation and classification approach," Biomedical Signal Processing and Control, Vol. 84, 2023 (**Impact Factor: 5.0**)

- [7] **Ahmed iqbal**, Muhammad Sharif, "[PDF-UNet: A semi-supervised method for segmentation of breast tumor images using a U-shaped pyramid-dilated network](#)," Expert Systems with Applications, Vol. 221, 2023 **(Impact Factor: 8.6)**
- [8] **Ahmed iqbal**, Muhammad Sharif, "[BTS-ST: Swin Transformer Network for Segmentation and Classification of Multimodality Breast cancer images](#)," Knowledge-Based Systems, Vol. 267, 2023 **(Impact Factor: 8.1)**
- [9] **Ahmed iqbal**, Muhammad Sharif, "[MDA-Net: Multiscale dual attention-based network for segmentation of lesion in breast ultrasound images](#)," Journal of King Saud University - Computer and Information Sciences, Vol. 34, No. 9, 2022 **(Impact Factor: 13.4)**
- [10] **Ahmed iqbal**, Muhammad Usman, Zohair Ahmed, "[An efficient deep learning-based framework for Tuberculosis detection using chest X-ray images](#)," Tuberculosis, Vol. 136, 2022 **(Impact Factor: 2.9)**
- [11] **Ahmed iqbal**, Muhammad Sharif, Mussarat Yasmin, Mudassar Raza, Shabib Aftab, "[A survey on generative adversarial networks applications in the medical image segmentations](#)," International Journal of Multimedia Information Retrieval, 2022 **(Impact Factor: 2.5)**
- [12] **Ahmed Iqbal**, Muhammad Sharif, Muhammad Attique Khan, Wasif Nisar & Majed Alhaisoni, "[FF-UNet: A U-shaped deep convolutional neural network for multimodal biomedical image segmentation](#)," Cognitive Computation, 2022 **(Impact Factor: 4.8)**
- [13] Mohammad Sh. Daoud, Shabib Aftab, Munir Ahmad , Muhammad Adnan Khan, **Ahmed Iqbal**, Sagheer Abbas, Muhammad Iqbal and Baha Ihnaini "[Machine Learning Empowered Software Defect Prediction System](#)," Intelligent Automation and Soft Computing, 2022 **(Impact Factor: 1.6)**
- [14] **Ahmed Iqbal**, Shabib Aftab, Umair Ali, Zahid Nawaz, Laraib Sana, Munir Ahmad, and Arif Husen, "[Performance Analysis of Machine Learning Techniques on Software Defect Prediction using NASA Datasets](#)," International Journal of Advanced Computer Science and Applications, Vol. 10, No. 5, 2019. **(ISI, Scopus Indexed)**
- [15] Shabib Aftab, Zahid Nawaz, Faiza Anwer, Munir Ahmad, **Ahmed Iqbal**, and Muhammad Salman Bashir, "[Using FDD for Small Project: An Empirical Case Study](#)," International Journal of Advanced Computer Science and Applications, Vol. 10, No. 3, 2019. **(ISI, Scopus Indexed)**
- [16] Muhammad Ibrahim, Munir Ahmad Shabib Aftab, **Ahmed Iqbal**, Bilal Shoaib Khan, Muhammad Iqbal, Baha Najim Salman Ihnaini, Nouh Sabri Elmitwally, "[Presenting and Evaluating Scaled Extreme Programming Process Model](#)," International Journal of Advanced Computer Science and Applications, Vol. 11, No. 11, 2020. **(ISI, Scopus Indexed)**
- [17] Muhammad Ibrahim, Shabib Aftab, Birra Bakhtawar, Munir Ahmad, **Ahmed Iqbal**, Nauman Aziz, Muhammad Sheraz Javeid, Baha Najim Salman Ihnaini, "[Exploring the Agile Family: A Survey](#)" IJCSNS International Journal of Computer Science and Network Security, Vol. 20, No. 10, PP. 163–179, 2020. **(ISI, Scopus Indexed)**

- [18] **Ahmed Iqbal** and Shabib Aftab, "[A Feed-Forward and Pattern Recognition ANN Model for Network Intrusion Detection](#)," International Journal of Computer Network and Information Security, Vol. 11, No. 4, PP. 19-25, 2019. **(ISI, Scopus Indexed)**
- [19] **Ahmed Iqbal**, Shabib Aftab, Israr Ullah, Muhammad Anwaar Saeed, and Arif Husen, "[A Classification Framework to Detect DoS Attacks](#)," International Journal of Computer Network and Information Security, Vol. 11, No. 9, PP. 40-47, 2019. **(ISI, Scopus Indexed)**
- [20] **Ahmed Iqbal**, Shabib Aftab, Israr Ullah, Muhammad Salman Bashir, and Muhammad Anwaar Saeed, "[A Feature Selection based Ensemble Classification Framework for Software Defect Prediction](#)," International Journal of Modern Education and Computer Science, Vol. 11, No. 9, PP. 54-64, 2019. **(ISI, Scopus Indexed)**
- [21] **Ahmed Iqbal**, Shabib Aftab, and Faseeha Matloob, "[Performance Analysis of Resampling Techniques on Class Imbalance Issue in Software Defect Prediction](#)," International Journal of Information Technology and Computer Science, Vol. 11, No. 11, PP. 44-53, 2019. **(ISI, Scopus Indexed)**
- [22] **Ahmed Iqbal**, and Shabib Aftab, "[A Classification Framework for Software Defect Prediction using Multi-Filter Feature Selection Technique and MLP](#)," International Journal of Modern Education and Computer Science, Vol. 12, No. 1, PP. 18-25, 2020. **(ISI, Scopus Indexed)**
- [23] **Ahmed Iqbal**, and Shabib Aftab, "[Prediction of Defect Prone Software Modules using MLP based Ensemble Techniques](#)," International Journal of Information Technology and Computer Science, Vol. 12, No. 1, PP. 18-25, 2020. **(ISI, Scopus Indexed)**
- [24] Faseeha Matloob, Shabib Aftab, and **Ahmed Iqbal**, "[A Framework for Software Defect Prediction using Feature Selection and Ensemble Learning Techniques](#)," International Journal of Modern Education and Computer Science, Vol. 11, No. 12, PP. 1-7, 2019. **(ISI, Scopus Indexed)**
- [25] Umair Ali, Shabib Aftab, **Ahmed Iqbal**, Zahid Nawaz, Muhammad Salman Bashir, Muhammad Anwaar Saeed, "[Software Defect Prediction Using Variant based Ensemble Learning and Feature Selection Techniques](#)," International Journal of Modern Education and Computer Science, Vol. 12, No. 5, PP. 29-40, 2020. **(ISI, Scopus Indexed)**

## UNDER REVIEW MANUSCRIPT

- [26] **Ahmed iqbal**, Marwa Qaraqe, Muhmmad Sharif, Isra Malik, Zahid Farooq Khan, and Muhammad Wajid, "BSM-Former: A Boundary Sensitive Lightweight Transformer for Martian Rock Segmentation," IEEE Transactions on Geoscience and Remote Sensing, 2025 **(Impact Factor: 7.5) [In Review]**

- [27] **Ahmed Iqbal**, Mohamad Hassan Fadi Hijab, Marwa Qaraqe, and Dena Al-Thani, "A Novel Framework for Evaluating Joint Engagement in Autistic Children During Collaborative Play", *IEEE Transactions on Affective Computing*, 2025 **(Impact Factor: 9.6) [In Review]**
- [28] Mohamad Hassan Fadi Hijab , Shaza Khattab , Mariam Bahameish, Marwa Qaraqe , Duha Assaf, **Ahmed Iqbal**, Maria Jimenez Andresb, Achraf Othman and Dena Al-Thania, "AI-Powered Insights: Tracking Joint Engagement in Autistic Children During Play", *IEEE Transactions on Affective Computing*, 2025 **(Impact Factor: 9.6) [In Review]**
- [29] Zahid Farooq Khan, **Ahmed iqbal**, and Muhammad Wajid, "SurgiFormer: Transformer based Network for Precise Surgical Instrument Segmentation," , *Knowledge-Based Systems*, 2025 **(Impact Factor: 7.2) [In Review]**
- [30] Muhammad Wajid, Nafees Qamar, Muneeba Islam, Zahid Farooq Khan, and **Ahmad Iqbal**, "TimeAware-AttGRU: A Soft-Attention-Based GRU for Predicting the Impact of Renewable Energy on CO2 Emissions and Climate Improvement," , *Energy and AI*, 2025 **(Impact Factor: 9.6) [In Review]**

#### ❁ ACTIVE REVIEWER

- Computer Methods in Biomechanics and Biomedical Engineering - Taylor & Francis
- International Journal of Machine Learning and Cybernetics - Springer ([Certificate](#))
- Computer Systems Science and Engineering - Tech Science Press
- IEEE Transactions on Neural Networks and Learning Systems
- Journal of Cancer Research and Clinical Oncology - Springer ([Certificate](#))
- International Journal of Computational Intelligence Systems ([Certificate](#))
- Engineering Applications of Artificial Intelligence - Elsevier
- Multidimensional Systems and Signal Processing - Springer ([Certificate](#))
- Biomedical Signal Processing & Control - SpringerNature
- Computers, Materials & Continua - Tech Science Press
- Human-centric Computing and Information Sciences
- International Journal of Intelligent Systems - Hindawi
- Computers and Electrical Engineering - Elsevier
- BMC Medical Informatics and Decision Making
- Signal, Image and Video Processing - Springer
- World Journal of Surgical Oncology - Elsevier
- Journal of Biomedical and Health Informatics
- Journal of Cognitive Computation - Springer ([Certificate](#))
- Machine Vision and Applications - Springer ([Certificate](#))
- IEEE Transactions on Artificial Intelligence
- Alexandria Engineering Journal - Elsevier
- Complex & Intelligent Systems - Springer
- Artificial Intelligence Review - Springer ([Certificate](#))
- Discover Applied Sciences - Springer
- Neural Processing Letters - Springer ([Certificate](#))

- Knowledge-Based Systems - Elsevier
- Journal of Digital Imaging - Springer
- Computational Intelligence - Wiley
- Applied Soft Computing - Elsevier
- The Visual Computer - Springer ([Certificate](#))
- Sensing and Imaging - Springer ([Certificate](#))
- Discover Computing - Springer ([Certificate](#))
- Multimedia Systems - Springer
- Digital Health - Sage Journals
- Cluster Computing - Springer ([Certificate](#))
- Scientific Reports - Nature ([Certificate](#))
- Control and Cybernetics
- BMC Medical Imaging ([Certificate](#))
- Cancer Medicine - Wiley ([Certificate](#))
- IEEE Network Magazine
- Brain-X - Wiley Journal
- Journal of Big Data ([Certificate](#))
- Brain-X - WILEY ([Certificate](#))
- PLOS ONE

## ✂ PROGRAMMING SKILLS

<b>Programming</b> <ul style="list-style-type: none"> <li>▪ Python (Django, <i>TensorFlow</i>, <i>PyTorch</i>, <i>Scikit-learn</i>, <i>NumPy</i>, <i>Pandas</i>, <i>Matplotlib</i>, <i>Seaborn</i>, <i>OpenCV</i>)</li> <li>▪ PHP (<i>CodeIgniter framework</i>, <i>WordPress</i>, <i>Joomla</i>)</li> <li>▪ MATLAB (<i>Computer vision</i>, <i>Image pre-processing</i>, <i>and Machine learning</i>)</li> </ul>	<b>Data Science</b> <ul style="list-style-type: none"> <li>▪ Probability &amp; statistics</li> <li>▪ Complex algorithm analysis</li> <li>▪ Feature selection &amp; reduction</li> <li>▪ Data visualization using Highcharts</li> <li>▪ Machine learning</li> <li>▪ Deep learning</li> <li>▪ Computer vision</li> </ul>
<b>Front-end</b> HTML, CSS, JavaScript, jQuery, AJAX, Bootstrap	<b>Databases</b> MySQL, PostgreSQL, MS SQL Server

## 🎓 DIPLOMA AND CERTIFICATIONS

- 2011     PHP Developer, Expert Rating (*Online Certification*)
- 2009     HTML Developer, W3Schools (*Online Certification*)
- 2004     Diploma in Graphic Design, Quaid-e-Azam College of Computer Science

## INTERNATIONAL COLLABORATION

- University of Kansas, Kansas State, USA
- Sejong University, Seoul, South Korea
- COMSATS University Islamabad, Wah Campus, Pakistan
- Sir Syed CASE Institute of Technology, Islamabad, Pakistan

## ACHIEVEMENT AND RECORDS

- Member, IEEE Computer Society
- Organizer of ZAB AI CUP 2023
- Organizer of Open House & Job Fair 2024 at SS-CASE-IT, Islamabad
- Developed a deep learning-based prototype for tuberculosis detection, which was purchased by DOPASI Foundation for 0.35 million PKR.
- Active reviewer of various IEEE Transactions, and Q1 Journals
- Jamia Akbaria - Islamic Quiz competition winner - 2005
- Travel Experience: *Thailand, Malaysia, Singapore, Qatar, and Saudi Arabia*

## REFERENCES

- [1] [Dr. Syed Jawad Hussain](#) (Associate Professor) Department of Computer Science, Sir Syed CASE Institute of Technology, Islamabad, Pakistan  
Mobile: +923355776484  
E-mail: jawad.hussain@case.edu.pk
- [2] [Dr. Mugahed A. Al-antari](#) (Assistant Professor) Department of Artificial Intelligence Data Science, Sejong University, South Korea  
Mobile: +821037621985  
E-mail: en.mualshz@sejong.ac.kr
- [3] [Dr. Shabib Aftab](#) (Assistant Professor) Faculty of Computer Science & Information Technology, Virtual University of Pakistan Lahore, Pakistan  
Mobile: +923324174891  
E-mail: shabib.aftab@vu.edu.pk

I hereby declare that the above furnished information is true and correct to the best of my knowledge.