

## Tahir Abbas, Ph.D. (Computer Science)

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### SHORT BIO

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TAHIR ABBAS KHAN (Senior Member IEEE) is currently working as an **Assistant Professor**, *Department of Communication and Cyber Security at Bahauddin Zakariya University, Multan*. Khan completed his Ph.D. from the National College of Business Administration & Economics (NCBA&E), Lahore, Pakistan, by obtaining a scholarship award from the Workers Welfare Fund (WWF), Islamabad, Pakistan, in 2023. Khan also completed his MS in Electronics Engineering from International Islamic University, Islamabad (IIUI), Pakistan, in 2010 by obtaining a scholarship award from the Punjab Information & Technology Board (PITB), Govt. of Punjab Pakistan 2010 and also did MS (CS) & BS (CS) degrees from the Virtual University (VU) of Pakistan, Lahore in 2020 & 2007 respectively. Before joining the University mentioned above, Khan worked in various academic and industrial roles in Pakistan. Khan has taught graduate and undergraduate students for the past **9 years**. So far, Khan has successfully supervised **02** Ph.D., **01** M.Phil. & **12+** undergraduate students. Presently, Khan is guiding **04** Ph.D. scholars and **02** M.Phil. Scholars and guiding **04** Ph.D. scholars and **04** M.Phil. Scholars as a Co-supervisor. Khan has published over 90+ research articles with a cumulative Google Scholar **Citation Score of 2250+** in reputed International Journals and International Conferences. Khan's research interests primarily include AI (Machine Learning/Deep Learning), Computer vision, Image Processing & Medical Diagnosis, Cyber Security, Federated Learning, etc.

### Professional Summary

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- 9+ Years of Teaching Experience:** I have 9+ years of teaching experience and have taught various courses at the undergraduate and graduate levels, as mentioned in Section 6 (a). Moreover, I have designed the curriculum for various classes for Computer Science, Software Engineering, and Information Technology degrees at both undergraduate and graduate levels.
- 6+ Years of Software Industry Experience:** I also have 6+ years of professional software development experience.
- Research Proposal Writing & Funding Acquisition Experience:** I have good experience writing research project proposals, along with international collaborators, on various research topics and acquiring funding from national and international funding organizations.

4. **International Collaboration Experience:** I have international collaboration experience on different research projects in the UK, UAE, KSA, Qatar, USA, Canada, South Korea, South Africa, Pakistan, and China, as reflected in my publications.
5. **Supervision Experience:** I supervise and co-supervise (4 + 4) = 8 Ph.D. and 2 MPhil thesis in the Computer Science Department at TIMES University, Multan, Pakistan. As mentioned in the experience section, I have successfully supervised 02 Ph.D. students and 01 M.Phil. student.
6. **Participation in Thesis and Oral Examination Committees:** I have participated in 8 Ph.D., 20+ M.Phil./MS, and 35+ undergraduate thesis and oral examination committees.
7. **Keen Interest in Experimentation:** I have a great passion for experimentation—especially on real systems and software services—and therefore strongly believe that my interest in practical work, along with my academic research and industry background experience and expertise, will bring a competitive advantage to the project.
8. **Accumulated JCR-IF=45+:** An accomplished researcher in machine learning, deep machine learning, disease diagnoses, digital healthcare, and medical image processing.
9. **HEC Approved Supervisor:** Higher Education Communication Pakistan approved supervisor in physical sciences.
10. **Member:** Senior Member IEEE , Lahore Section, Pakistan, R10 -Asia and Pacific. (SM ID: Member #99608805)
11. **H-index: 24, I-index: 40, and Total Citations: 2250+**
12. **Best University Researcher Award, TIMES University, Multan, Pakistan, 2023-2024.**

## 1. FUNDING PROJECTS

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### As a Principle Investigator

- **Fused Federated Learning with deep machine learning based smart healthcare system,** Workers Welfare FUND (WWF), Labour & HR department, Government of Pakistan, 2020-2023. (Proj No: OTS-20237210, Amount: 1400,000 PKR=23,300 USD, Completed).
- **Robust OFDM-based MC-CDMA System.** Punjab Information Technology Board, Government of Pakistan, 2007-2010. (Proj No: OTS-201047212, Amount: 700,000 PKR=11,650 USD, Completed).

- **Topology Aware Load Balancing in Data Center Networks With Machine learning Approaches**, Punjab Workers Fare Fund, Lahore, Pakistan. (Project No: 105-2016, Amount: 1046,000 PKR=10,000 USD, Completed).

### As a Co-Investigator

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- 1) **Internet of Medical Things-based smart Healthcare System.** This project is funded by UJ-02-032-DR, funding provided by the University of Jeddah, Jeddah, Saudi Arabia
- 2) **Multidisciplinary cancer disease classification using adaptive FL in the healthcare industry 5.0.** This Project was funded by the Weill Cornell Medicine—Qatar Health Sciences Library.
- 3) **Secure IoMT for Disease prediction empowered by Transfer learning.** The Qatar National Library supported this work.

## 2. ACADEMIC/PROFESSIONAL PARTICULARS

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### (a) Field of Specialization:

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- Machine & Deep Learning, Federated Machine Learning, Fused Federated Learning, Cyber Security, Medical Imaging, Image Segmentation, and Smart Healthcare.

### (b) Academic Qualifications

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***Ph.D., Computer Science*** *2023*

Specialization: **Artificial Intelligence in smart healthcare**

National College of Business Administration & Economics (NCBA&E), Lahore, Pakistan.

**Thesis:** Fused Federated Learning with Deep Extreme Machine Learning Based Intelligent System for Disease Prediction in a Smart Health Care 5.0

([https://www.hec.gov.pk/english/services/students/PCD/Pages/online\\_Application\\_PCD\\_No.aspx](https://www.hec.gov.pk/english/services/students/PCD/Pages/online_Application_PCD_No.aspx))(Ph.D. Country Directory #30495)

**CGPA:** 3.90/4.00

***MS, Computer Science*** *2020*

Virtual University of Pakistan, Lahore, Pakistan.

**Thesis:** [Topology Aware Load balancing in datacenter networks](#)

**CGPA:** 3.73/4.00

***MS, Electronic Engineering*** *2010*

International Islamic University, Islamabad, Pakistan.

**Thesis:** [Robust OFDM-based MC-CDMA System](#).

**CGPA:** 3.20/4.00

***BS, Computer Science***

2007

Virtual University of Pakistan, Lahore, Pakistan.

**Project:** [Courier Management System](#).

**CGPA:** 2.94/4.00

c) **Academic Honors and Awards**

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1. Outstanding Talented Scholarship (OTS) from the Punjab Information Technology Board, Government of Pakistan, 2007-2010.
2. Talent scholarship from Punjab Workers Welfare Fund, Lahore, Pakistan, 2016-2018.
3. Talent scholarship from Workers Welfare Fund (WWF), Labour & HR Department Lahore, Pakistan, 2020-2023.

5. **EXPERIENCE**

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a) **Academic Positions Held**

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**Assistant Professor**

*September 2025 to date*

Department of Communication and Cyber Security, Bahauddin Zakariya University, Multan, Punjab, Pakistan.

***Assistant Professor***

*August 2023 to July 25*

Department of Computing, TIMES University, Multan, Punjab, Pakistan.

***Instructor /Lecturer***

*Feb. 2012 to Jan 2017*

Punjab Workers Welfare Fund (PWWF), Labour & HR Department, Govt. of Punjab, Pakistan.

***Lecturer***

*Nov. 2007 to Feb. 2012*

University of Management & Information Technology, AIOU Campus, Rawalpindi, Pakistan.

b) **Administrative Positions Held**

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***Head of Department (Computing & IT)***

*Jan. 2010 to Feb.2012*

University of Management & Information Technology, Rawalpindi, Pakistan.

c) **Membership in Professional Bodies**

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1. Senior Member of IEEE, Lahore Section, Pakistan. (**99608805**), Joining Date: 01/2023.

2. HEC, Pakistan Ph.D. Approved Supervisor (Physical Sciences), Joining Date: 10/2023.

d) Professional/Industrial Positions Held

1. **Sr. Research Officer.** Jan, 2020 to July. 2023 Al-Khwarizmi University of Computer Science (KICS), University of Engineering & Technology, Lahore, Pakistan.

2. **Assistant Manager IT** Feb 2017 to Jan 2020

United Software & Technologies International (Pvt.), Lahore, Punjab, Pakistan

6. TEACHING

a) Summary of Selective Courses Taught

Course Title	Place Taught	Level
Artificial Intelligence	BZU-C&CS, Multan	Undergraduate
Computer Networks	BZU-C&CS, Multan	Undergraduate
Data Communication	BZU-C&CS, Multan	Undergraduate
Network Fundamentals	BZU-C&CS, Multan	Undergraduate
Deep Learning	TIMES University, Multan	Advanced Graduate
Advanced Operating System	TIMES University, Multan	Advanced Graduate
Software Engineering	TIMES University, Multan	Undergraduate
Wireless Network	IM&IT, RWP	Graduate

b) Participation in Academic Accreditation

1. **BS Cyber Security**, C&CS, BZU, Multan, National Computing Education Accreditation Council,
2. BS (CS), Member, TIMES University, Multan, Pakistan, National Computing Education Accreditation Council,

c) Research Students Supervised/Trained

Sr. No.	Level	Number of Trainees
1.	Ph.D. Students (Ph.D. Supervision)	2+2=04
2.	Master Students (MS/M.Phil. Supervision)	3+
3.	Undergraduate Students (BS/MSC Supervision)	12+

#### d) Participation in Thesis and Oral Examination Committees

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<u>Sr. No.</u>	<u>Level</u>	<u>Number of Examinations</u>
1.	Ph.D. Students	8
2.	Master Students (MS/M.Phil.)	20+
3.	Undergraduate Students (BS/MSC/MSC)	35+

#### e) Selective List of Supervision

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- (Ph.D.) Rabia Javid (Reg. # MC-PHDCS-219-003), “Internet of Medical Things (IoMT) Enabled Intelligent System for Chronic Disease Prediction Using Deep Machine Learning In Healthcare 5.0”.
- (Ph.D.) Atif Raza Zaidi (Reg. # MC-PHDCS-219-001), “Detection of Android Malware Using Deep Learning”.
- (M.Phil.) Aiman Fatima (Reg. # MC-MSCS-219-005), “Detecting Breast Cancerous Cells using Deep Learning Technique”.
- (M.Phil.) M. Atif (Reg. # MC-MSCS-233-001), “Disease classification using Semi Supervise Learning”.
- (BS/MCS/MSC) Supervised more than 10 students in different areas of Computer Science and Electronics Engineering.

#### e) Ph.D. Co-Supervision

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- (Ph.D.) Sayyid Kamran Hussain (Reg. # MC-PHDCS-219-001), “Diagnosis and Classification of Ocular Diseases Using Spatial Correlation Networks”.
- (Ph.D.) Muhammad Imran (Reg. # MC-PHDCS-219-004), “Machine Learning Based Prediction for Early Detection and Risk Assessment of Cardiovascular Diseases”.
- (Ph.D.) MC-PHDCS-219-008;
- (Ph.D.) MC-PHDCS-219-008;

#### f) Training

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1. Quality of Education and Training Workshop, TIMES University, Multan, 1 day (09/24-09/24).
3. How to Improve the Teaching Skills, Emerson University, Pakistan, 2 days (12/23-13/23).

#### g) Online Course Certifications

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1. Course 1: Deep Learning Fundamental; Python.
2. Course 2: Basic Data Science; Use Cases of Data Science

### 7. RESEARCH

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#### a) Selected Research Areas

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- Artificial Intelligence

- Machine & Deep Learning
- Computer Vision
- Cyber Security
- Healthcare systems

## b) Publications/Citations Data

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<b>Sr. No</b>	<b>Type of Publication</b>	<b>Number of Publications</b>
1		
2	Total Journal Articles (Accepted & Published)	60+
3	Total Journal Articles (Under Review)	05
4	Total Journal Submitted Articles	07
5	Total Conference Articles (Accepted & Published)	15
6	Total Conference Submitted Articles	04
	Total	<b>90+</b>
	<b>Total Impact Factor (Published JCR-IF)</b>	<b>45+</b>

<b>Sr. No</b>	<b>Citation Source</b>	<b>Number of Citations</b>	
1	<a href="#">Google Scholar</a>	2250+	
	a) H-Index		24
	b) I-Index		40
2	<a href="#">Research Gate</a>	1000+	
	a) H-Index		18
	b) Research Interest Score		615+

## 8. EXTRA CURRICULUM AWARDS & ACHIEVEMENTS

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1. Successfully Organized the Cricket Tournament each semester from 2007 – 2010 at the International Islamic University Islamabad.
2. Played as a Cricket University team player from Sept 2007 - Aug 2010.
3. Declared as the Champion in HEC Intervarsity Cricket Tournament ZONE C (Islamabad) in sessions 2008-2009 & 2010-2011.
4. Won Championship in the District High School Zonal Cricket Tournament, District Muzaffargarh in 1998-1999.
5. Successfully Organized the Twin City Cricket Tournament (Rawalpindi & Islamabad) in 2009-2010.

## 9. SKILLS & EXPERTISE

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- **Programming Languages:** C, C++, MATLAB, Python.
- **Web development:** WordPress, HTML, JavaScript, XML.
- **Graphic Tools:** Adobe Photoshop.
- **Databases:** Oracle, MS Access, SQL Server 2005, SQL Server 2019.
- **Operating Systems:** Linux, Windows.

## 10. LIST OF RESEARCH PUBLICATIONS

Sr.#	TITLE WITH AUTHORS (year-wise)	CATEGORY
1	<b>Abbas, Tahir</b> , et al. "Significance of unifying semi and self-supervision for the radical improvement of medical imaging: a collaborative research effort." <i>Biomedical Signal Processing and Control</i> 111 (2026): 108391.	W, Q2, I.F: 4.9
2	Zaidi, Atif Raza, <b>Tahir Abbas</b> , Sadaqat Ali Ramay, Tariq Shahzad, Zahid Hussain Qaisar, Muhammad Adnan Khan, Adnan Abu-Mahfouz, and Amin Beheshti. "SNEL-DFE: Android malware detection using Siamese networks with ensemble learning." <i>Scientific African</i> (2025): e02816.	X, Q1, I.F: 3.3
3	Badar, Danyal, Junaid Abbas, Raed Alsini, <b>Tahir Abbas</b> , Wang ChengLiang, and Ali Daud. "Transformer attention fusion for fine grained medical image classification." <i>Scientific Reports</i> 15, no. 1 (2025): 20655.	W, Q1, I.F: 3.9
4	Zaidi, Atif Raza, <b>Tahir Abbas</b> , Ali Daud, Omar Alghushairy, Hussain Dawood, and Nadeem Sarwar. "Enhancing Android Malware Detection with XGBoost and Convolutional Neural Networks." <i>Computers, Materials &amp; Continua</i> 84, no. 2 (2025).	W, Q3, I.F: 1.7
5	Javed, Rabia, <b>Tahir Abbas</b> , Tariq Shahzad, Khadija Kanwal, Sadaqat Ali Ramay, Muhammad Adnan Khan, and Khmaies Ouahada. "Enhancing Chronic Disease Prediction in IoMT-Enabled Healthcare 5.0 using Deep Machine Learning: Alzheimer's Disease as a Case Study." <i>IEEE Access</i> (2025).	W, Q2, I.F: 3.6
6	<b>Abbas, Tahir</b> , Shujaat Ali Rathore, Amira Turki, Sunawar Khan, Omar Alghushairy, and Ali Daud. "Enhancing Software Engineering With AI: Innovations, Challenges, and Future Directions." <i>IET Software</i> 2025, no. 1 (2025): 5691460.	W, Q3, I.F: 1.3
7	<b>Abbas, Tahir</b> , Areej Fatima, Tariq Shahzad, Meshal Alharbi, Muhammad Adnan Khan, and Arfan Ahmed. "Multidisciplinary cancer disease classification using adaptive FL in healthcare industry 5.0." <i>Scientific Reports</i> 14, no. 1 (2024): 18643.	W, Q1, I.F: 3.9
8	Javed, Rabia, <b>Tahir Abbas</b> , Ali Haider Khan, Ali Daud, Amal Bukhari, and Riad Alharbey. "Deep learning for lungs cancer detection: a review." <i>Artificial Intelligence Review</i> 57, no. 8 (2024): 197.	W, Q1, I.F: 13.9
9	<b>Khan, Tahir Abbas</b> , Areej Fatima, Tariq Shahzad, Khalid Alissa, Taher M. Ghazal, Mahmoud M. Al-Sakhnini, Sagheer Abbas, Muhammad Adnan Khan, and Arfan Ahmed. "Secure IoMT for disease prediction empowered with transfer learning in healthcare 5.0, the concept and case study." <i>IEEE Access</i> 11 (2023): 39418-39430.	W, Q2, I.F: 3.6
10	<b>Khan, Tahir Abbas</b> , Sagheer Abbas, Allah Ditta, Muhammad Adnan Khan, Hani Alquhayz, Areej Fatima, and Muhammad Farhan Khan. "IoMT-Based Smart Monitoring Hierarchical Fuzzy Inference System for Diagnosis of COVID-19." <i>Computers, Materials &amp; Continua</i> 65, no. 3 (2020).	W, Q3, I.F: 1.7

Journal Publications (Up-to-date publications list is available on Google Scholar:

1. [https://scholar.google.com/citations?hl=en&user=hgevkkxMAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=hgevkkxMAAAAJ&view_op=list_works&sortby=pubdate)

## 11. REFERENCES (PAKISTANI)

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- 1) Dr. Muhammad Ashraf  
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- 2) Dr. Jamshaid Iqbal Janjua  
Sr. Technical Manager, Al-Khwarizmi University of Computer Science (**KICS**), University of  
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## 12. REFERENCES (INTERNATIONAL)

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- 1) Dr. Sagheer Abbas  
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