

Dr. Asfandyar Khan

Lecturer, Department of Computer Science & Information Technology,
Block:8, 2nd Floor, Office:9, Hazara University, Mansehra, KP, Pakistan



Personal Profile

Father: Ahmadyar Khan (Late)

Date of Birth: 20th March, 1982

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Google Scholar: <https://scholar.google.com.pk/citations?user=soSHzTcAAAAJ&hl=en&oi=ao>

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Career Objective

Seeking a creative and challenging position in a prestigious organization where I can effectively utilize and develop my professional and leadership skills, enhance my academic and research expertise, and stay updated with cutting-edge ICT technologies in a dynamic and stable workplace.

Education

S.No.	Degree Title	Completion Year
1	PhD, Computer Science <ul style="list-style-type: none">- Department of Computer Science & Information Technology, Hazara University, Mansehra, KP, Pakistan- Thesis Topic: "IMPROVED QOS AWARE CLUSTER-BASED ARCHITECTURE FOR ADVANCED METERING INFRASTRUCTURE IN SMART GRID"- CGPA: 4.0 / 4.0- Supervisor: Dr. Arif Iqbal Umar (Late)	2023
2	MS, Computer Science <ul style="list-style-type: none">- Department of Computer Science & Information Technology, Hazara University, Mansehra, KP, Pakistan- Thesis Topic: "A SECURE COMMUNICATION PROTOCOL FOR ADVANCED METERING INFRASTRUCTURE IN SMART GRID"- CGPA: 3.63 / 4.0	2015

3	MCS - Department of Computer Science, IBMS/CS, Agriculture University, Peshawar, KP, Pakistan - Final Year Project: "COMPUTERIZATION OF KHYBER MEDICAL LABORATORY, TANGI, KP, PAKISTAN" - CGPA: 3.65 / 4.0	2005
4	B.Sc, Computer Science - University of Peshawar, KP, Pakistan - Grade: 1 st Division	2002
5	F.Sc, Pre-Engineering - Board of Intermediate & Secondary Education, Peshawar, KP, Pakistan - Grade: A	2000
6	S.Sc, Sciences - Board of Intermediate & Secondary Education, Peshawar, KP, Pakistan - Grade: A	1998

Awards & Honors

- ✦ Awarded full six (6) month **IRSIP** scholarship for Ph.D. studies granted by Higher Education Commission of Pakistan (1st November, 2019 to 30th April, 2020)
- ✦ Awarded one (1) year **National Internship Program (NIP)**, President, Pakistan, at Advocate General Office, Peshawar High Court, KP, Pakistan (1st July, 2007 to 4th March, 2008)
- ✦ Awarded six (6) month **Internship** at UNHCR, Peshawar, Pakistan (2004)
- ✦ Secured overall 4th position in **MCS** (Computer Science Batch) examination at university level
- ✦ Secured overall 1st position in **B.Sc.** (Computer Science) examination at college level
- ✦ Secured overall 2nd position in **F.Sc** (Pre-Engineering) examination at college level
- ✦ Secured overall 2nd position in **S.Sc** (Science Group) examination at school level

Professional Certifications & Diplomas

Certificate / Diploma	From/Year
✦ Microsoft Certified System Administration (MCSA) - Exam 070-290: Managing and Maintaining a Microsoft Windows Server 2003 Environment	Microsoft (2007)
✦ Microsoft Certified Professional (MCP) - Exam 070-270: Installing, Configuring, and Administering Microsoft Windows XP Professional	Microsoft (2006)
✦ A++ - Hardware installation, configuration, and troubleshooting	BRAINS Institute, Peshawar (2006)

✦ **MCSE/MCSE.NET**

The short course includes:

- Windows 2000 (Server & Professional)
- Windows 2003 (Server & XP)
- Active Directory Services
- Network Infrastructure Design / Administering Network Infrastructure
- Network Security Design
- SQL Server 2K Administration

COMSATS
Institute,
Peshawar
(2004)

Work Experience (Teaching, Administrative, Professional & Research)

S.No.	Job Description	Duration
1	<p>Lecturer (BPS-18 Regular), Department of Computer Science & Information Technology, , Hazara University, Mansehra, KP, Pakistan (4th March, 2008 –to- till date)</p> <p>Key Responsibilities</p> <ul style="list-style-type: none"> ✦ Preparing and delivering lectures for core courses of BSCS, BSAI, and BSSE programs ✦ Conduct Laboratory sessions to provide hands-on experience to the students ✦ Developing course syllabi, and preparing quizzes, assignments, and examinations for student assessment ✦ Prepare the course folders and supplementary reports for each course in each semester ✦ Supervision of Final Year Projects (FYPs) ✦ Class Tutor – Department of English ✦ Successfully assisted NCEAC Zero Visit for BS Software Engineering, Artificial Intelligence, and Computer Science Programs in year 2021 and 2023 ✦ Member, Accreditation committee, CS & IT Department (2023 - Present) ✦ Sports Coordinator, CS & IT Department (2023 - Present) ✦ Exam Coordinator, CS & IT Department (2023 - Present) ✦ Convener, Unfair Means (UFM) Examination Committee, CS & IT Department (2023 - Present) ✦ Secretary, PhD Comprehensive Examination, CS & IT Department (2023 - Present) ✦ Member Board of Studies (BOS) (2023 - Present) ✦ Warden, Faculty & Staff Hostel-3 (2022 - Present) ✦ Data collection & management of whole CS & IT Department ✦ Focal Person, Prime Minister Laptop Scheme, CS & IT Department (2015 & 2017) 	17 Years (Continue)

- ✦ Participating and arranging workshops and trainings for continuous professional development
- ✦ **Member**, admission committee (2009 - 2018)
- ✦ **Time Table Coordinator**, CS & IT Department (2011-2014)
- ✦ **Focal Person**, Hazara University Alumni Association, CS & IT Department (2025 - continue)
- ✦ **Battagram Campus**, two day visiting faculty

2	Research Assistant , Department of Computer Science & Engineering, Ho Sin Hang Engineering Building, The Chinese University of Hong Kong (CUHK) (November 2019-April 2020)	6 (Months)
3	Internee , Advocate General Office, Peshawar High Court, KP, Pakistan (July 2007-March 2008)	8 (Months)
4	Visiting Faculty , BRAINS Post Graduate College of IT & Software House, Peshawar, KP, Pakistan (February 2006- February 2007)	3 (Months)
5	Network Administrator , Digistan, Kabul, Afghanistan (January, 2006)	1 (Month)
6	IT Engineer , ORATECH (Oracle Technologies System (Pvt) Ltd), Islamabad, Pakistan (July 2005 – December 2005)	1 (Year) & 4(Months)
7	Visiting Faculty , Country Model College & Management Charsadda (April 2005 – June 2005)	2 (Months)
8	Lecturer , Leads Institute of IT & Software House Charsadda (June 2005 – August 2005)	3 (Months)
8	Internee , UNHCR, Peshawar, KP, Pakistan (March 2004 - August 2004)	6 (Months)

Workshops & Trainings

✦ **Outcome Based Education (OBE) Training (2023 – 2024)**

Recently, attended multiple trainings on OBE.

✦ **Election Training**

Attended two day training organized by Election Commission of Pakistan, KP, in 2015, and 2018 for general election in Pakistan.

✦ **Cisco Training** (3rd June to 4th June, 2011)

Co-organized a two day Cisco training for the CS & IT Department students with collaboration to NSIT, Peshawar at Hazara University, Mansehra.

✦ **Disaster Risk Management** (5th April to 6th April, 2011)

Attended two day workshop at Hazara University, Mansehra organized by NDMA Pakistan, which was sponsored by UNDP (United Nation Development Program).

Community Work

✦ **Vice-President (VP) of HUASA** (6th December, 2023 to 5th December, 2024)

As VP of HUASA (Hazara University Academic and Staff Association), I was responsible for active participation cabinet meetings, gatherings, and worked as

bridge between the HU community (faculty members) and university administration to resolve various academic and social issues on the campus.

✦ **Sports Secretary of HUASA** (1st March 2016 to March 2017)

Actively involved in arranging various sports activities (cricket, football, badminton, tug of war, etc.) for the HU community.

Courses Taught

- ✦ Mobile Application Development (Fall-2024, BBSE 7th (A &B))
 - ✦ Knowledge Representation & Reasoning (Fall-2024, BSAI 5th)
 - ✦ Software Metrics (Spring-2024, BBSE 8th (A &B))
 - ✦ Database System (Spring-2024, BBAI 3rd)
 - ✦ Introduction to Databases
 - ✦ VB.Net Programming
 - ✦ Computer Communication & Networks
 - ✦ Information Security
 - ✦ Programming Fundamental
 - ✦ Introduction to Computing
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Key Skills in Software

- ✦ Microsoft Visio 2016 Professional
 - ✦ Microsoft Office (MS Word, Excel, Power Point, MS Access)
 - ✦ Microsoft SQL Server Express 2019
 - ✦ Android Studio & Visual Studio code
 - ✦ Node JS/Java/Java Script
 - ✦ VB.Net
 - ✦ Python
 - ✦ C/C++
 - ✦ NS2
 - ✦ CloudSim
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Research Interests

- ✦ Network Design and Planning in Smart Grid Infrastructure
 - ✦ Resource handling and allocation in Advanced Metering Infrastructure
 - ✦ QoS ✦ IoT ✦ Fog & Cloud Computing ✦ Network Security
 - ✦ Data Analytics ✦ Machine Learning ✦ eHealthcare
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Publications

Journal Papers

- 1 Shah, S., Sarwar, N., Salam, A., Asfandyar Khan *et al.* A flexible and lightweight signcryption scheme for underwater wireless sensor networks. *Sci Rep* **15**, 13511 (2025). <https://doi.org/10.1038/s41598-025-95836-8> [IF: 3.8, Category: W]
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2 **Asfandyar Khan**, Faizan Ullah, Dilawar Shah, Muhammad Haris Khan, and Muhammad Tahir. "EcoTaskSched: A hybrid machine learning approach for energy-efficient task scheduling in IoT-based Fog-Cloud environments" *Sci Rep* 15 (1), 12296 (2025). <https://doi.org/10.1038/s41598-025-96974-9> [IF: 3.8, Category: W]

3 Alumfareh, Maram Fahaad, Mamoona Humayun, Zulfiqar Ahmad, and **Asfandyar Khan**. "An Intelligent LoRaWAN-based IoT Device for Monitoring and Control Solutions in Smart Farming through anomaly detection integrated with unsupervised machine learning." *IEEE Access* (2024), <https://doi.org/10.1109/ACCESS.2024.3450587>. [IF: 3.4, Category: W]

4 Qazi, Shahid, Dilawar Shah, Mohammad Asmat Ullah Khan, Shujaat Ali, Mohammad Abrar, **Asfandyar Khan**, and Muhammad Tahir. "m5C-TNKmer: Identification of 5-Methylated Base Cytosine of Ribonucleic Acid Using Supervised Machine Learning Techniques." *Engineering Reports* (2024): e13073, <https://doi.org/10.1002/eng2.13073>. [IF: 2.29, Category: X]

5 Habib, Faiza, Syed Hamad Shirazi, Khursheed Aurangzeb, **Asfandyar Khan**, Bharat Bhushan, and MUSAED ALHUSSEIN. "Deep Neural Networks for Enhanced Security: Detecting Metamorphic Malware in IoT Devices." *IEEE Access* (2024), <https://doi.org/10.1109/ACCESS.2024.3383831>. [IF: 3.4, Category: W]

6 **Asfandyar Khan**, Syed Hamad Shirazi, Muhammad Adeel, Muhammad Assam, Yazeed Yasin Ghadi, Heba G. Mohamed, and Yong Xie. "A QoS-aware Data Aggregation Strategy for Resource constrained IoT-enabled AMI Network in Smart Grid." *IEEE Access* (2023), <https://doi.org/10.1109/ACCESS.2023.3312552>. [IF: 3.4, Category: W]

7 Khan, Muhammad Salman, Mohsin Shah, **Asfandyar Khan**, Amjad Aldweesh, Mushtaq Ali, Elsayed Tag Eldin, Waqar Ishaq, and Lal Hussain. "Improved Multi-Model Classification Technique for Sound Event Detection in Urban Environments." *Applied Sciences* 12, no. 19 (2022): 9907, <https://doi.org/10.3390/app12199907>. [IF: 2.5, Category: W]

8 **Asfandyar Khan**, Arif Iqbal Umar, Syed Hamad Shirazi, Waqar Ishaq, Mohsin Shah, Muhammad Assam, and Abdullah Mohamed. "QoS-aware cost minimization strategy for AMI applications in smart grid using cloud computing." *Sensors* 22, no. 13 (2022): 4969. <https://doi.org/10.3390/s22134969>. [IF: 3.9, Category: W]

9 Shahzad, Muhammad, Arif Iqbal Umar, Syed Hamad Shirazi, Zakir Khan, **Asfandyar Khan**, Muhammad Assam, Abdullah Mohamed, and El-Awady Attia. "Identification of anemia and its severity level in a peripheral blood smear using 3-tier deep neural network." *Applied Sciences* 12, no. 10 (2022): 5030. <https://doi.org/10.3390/app12105030>. [IF: 2.5, Category: W]

10 **Asfandyar Khan**, Arif Iqbal Umar, Arslan Munir, Syed Hamad Shirazi, Muazzam A. Khan, and Muhammad Adnan. "A qos-aware machine learning-based framework for ami applications in smart grids." *Energies* 14, no. 23 (2021): 8171. <https://doi.org/10.3390/en14238171>. [IF: 3.252, Category: W]

11 Ullah, Insaf, Hizbullah Khattak Noor–UI-Amin, Sultan Ullah, and **Asfandyar Khan**. "Multi receiver proxy signcryption based on hyper elliptic curve cryptography." *International Journal of Computer Science and Information Security (IJCSIS)* 14, no. 12 (2016).

Conference Papers

1 **Asfandyar Khan**, Nizamuddin, J. Iqbal, and N. U. Amin, "An Efficient and Secure Cluster-Based Architecture for AMI Communication in Smart Grid," 2nd International Conference on Computational and Social Sciences (ICCS), pp. 342–349, Rize, Turkey, August, 2014.

- 2 N. U. Amin, J. Iqbal, A. Arifa, Nizamuddin and **Asfandyar Khan** "Secure Key establishment and cluster Head selection for Body Area Networks Based on Signcryption", 2nd International Conference on Computational and Social Sciences (ICCSS), pp. 210-216, Rize, Turkey, August, 2014.

International Journal & Conference Reviewership

- ✦ IEEE Journal of Biomedical & Health Informatics
- ✦ Computers in Human Behavior
- ✦ International Conference on Neural Information Processing (ICONIP-2024)
- ✦ Cluster Computing, Scientific Reports, Annals Communications
- ✦ The Journal of Supercomputing
- ✦ IET Cyber-Physical Systems: Theory & Applications

Academic Supervision

Undergraduate: Final Year Projects (FYPs)

Project Title	Program	Semester
Dial for Help	BSCS	Fall-2024
JZT Welfare Trust Organization Application	BSCS	Fall-2024
Quick Fix	BSCS	Fall-2024
Multifactor Based Weather Forecasting System	BSSE	Fall-2024
Multifactor base weather Monitoring system with integration of Nodemcu and Thingspeak	BSAI	Spring-2024
Human Counting and Ethnicity Detection	BSAI	Spring-2024
Weed Identification and control through image recognition for precision Agriculture	BSSE	Spring-2024
AI-Powered Multiplayer car Racing Game in Unity	BSSE	Spring-2024
Plant disease detection	BSSE	Spring-2024
Centralized Research Forum	BSCS	Spring-2024
HU Chat Connect	BSCS	Spring-2024
Chat Server	BSCS	Past
NGO Coordination Online System	BSCS	Past
Computerization of Union Council, Baffa, Mansehra	BSCS	Past
Management Information System (MIS) for WAPDA	BSCS	Past
Computerization of Afghan Refugees, Jalozai Campus	MCS	Past
Computerization of SoS School System, Dhodial, Mansehra	BSCS	Past
Computerization of Zaiban Motors and Show room, Mansehra	MCS	Past
Computerization of Khattack CDs Center, Peshawar	BSCS	Past

Graduate: MS Research Supervision

Scholar: Mr. Bilal (3012-20110)

Thesis Title: "Priority-Aware Traffic Control Mechanism For Healthcare Applications In IoT-Enabled Wireless Body Area Network"

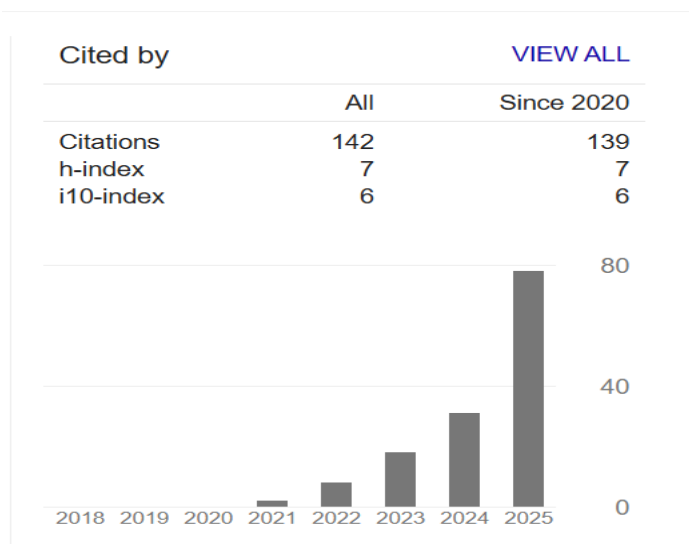
Completion Date: 24th November, 2022

Country: Afghanistan

Languages

- ✦ English (Advanced) ✦ Urdu (National- Advanced)
 - ✦ Pashto (Mother Language) ✦ Arabic (Intermediate)
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Google Scholar



References

1 Dr. Mushtaq Ali (Chairman)

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2 Dr. Noorul Amin (Ex Head of Department)

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