

# Abdul Ahad, Ph.D.

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✉ ahad9388@gmail.com

🌐 <https://orcid.org/0000-0002-3914-2503>

🌐 <https://www.scopus.com/authid/detail.uri?authorId=58648777400>

🌐 <https://www.researchgate.net/profile/Abdul-Ahad-89>

🌐 [https://scholar.google.com/citations?user=RdUQ\\_FQAAAAJ&hl=en&oi=sra](https://scholar.google.com/citations?user=RdUQ_FQAAAAJ&hl=en&oi=sra)

☎ +92341-5678654

📠 Wechat: abdualahad183

## Education

- 2018 – 2022    📖 **Ph.D., Sunway University, Malaysia.**  
Major: *Computer Science*  
**Thesis:** An intelligent clustering-based routing protocol (crp-gr) for 5g-based smart healthcare using game theory and reinforcement learning.
- 2015 – 2017    📖 **M.S., Virtual University of Pakistan.**  
Major: *Computer Science*  
**Thesis:** Design and performance analysis of DSS (dual sink-based scheme) protocol for WBASNs.
- 2012 – 2014    📖 **M.Sc., Swat University of Pakistan.**  
Major: *Computer Science*  
**FYP:** Comparison of energy efficient routing protocols in a wireless sensor networks.

## Professional Degree

- 2013 – 2014    📖 **Be.D., Allama Iqbal Open University, Islamabad, Pakistan.**  
Major: *Bachelor's of Education*  
1. Teaching Methodologies  
2. Educational Theory and Foundations  
3. Educational Technology  
4. Professional Practice and Development  
5. Educational Research


## Professional Certificates

- 2023 – 2023    📖 **University of Management and Technology, Sialkot, Pakistan.**  
Major: *The Art & Science of Teaching and Learning in Higher Education*  
1. Mechanics of Teaching  
2. Teaching and Learning Communique  
3. Quality Matters
- 📖 **Stanford University and DeepLearning.AI by Coursera.**  
Major: *Machine Learning Specialization*
- 2022 – 2023    📖 **University of Illinois at Urbana-Champaign by Coursera.**  
Major: *Cloud Networking*
- 2022 – 2022    📖 **IBM Certified by Coursera.**  
Major: *Introduction to Cyber-security Tools and Cyber Attacks*
- 📖 **University of Michigan by Coursera.**  
Major: *Python for Everybody Specialization*

## Professional Certificates (continued)

2012 – 2013     **PTC., Allama Iqbal Open University, Islamabad, Pakistan.**  
Major: *Teaching Certificate*

## Employment History

2023 – 2025     **Post Doctoral Fellowship**  
School of Software  
Northwestern Polytechnical University, Xian, China.

- **Completed Projects**


- 5G/B5G-based Internet of Medical Things (IoMT) and Federated Learning.
- Cyber Security and Smart Healthcare Applications.
- Wireless Communication Technologies and Internet of Things (IoT).
- Classification of Vascular Dementia on magnetic resonance imaging using deep learning architectures.
- Big Data-Driven Smart Healthcare: Federated Learning Approach for Precise Cardiovascular Disease Prediction.
- Heart Stroke detection using Fuzzy K-Nearest Neighbor and Artificial Neural Network using Chi-Square and Best First Search algorithm.
- Federated Deep Learning with CNNs: A Privacy-Preserving Approach to Big Data in Smart Healthcare.

- **Co-Supervision (Ph.D Students Graduated)**

- Kazi Istiaque Ahmed (**Thesis:** Trust-Aware Authentication and Authorization for IoT: A Federated Machine Learning Approach).
- Amna Mughees (**Thesis:** Energy-efficient joint resource allocation in 5G HetNet using Multi-Agent Parameterized Deep Reinforcement learning).

- **Global Summer Courses Teaching**

- Scientific Research Methods and Tools, Artificial Intelligence and Machine Learning, Introduction to Convexity, Optimization, and Algorithms, Game Theory for Cybersecurity.

2022 – Present     **Adjunct Scientific Researcher**  
Department of Electronics and Communication Engineering.  
Istanbul Technical University, Turkey.

- **Completed Projects**

- Energy-efficient Routing to Prevent Void Holes in Heterogeneous 5G Wireless Sensor Network Using Game Theory.
- Trust-Aware Authentication and Authorization for IoT: A Federated Machine Learning Approach.
- Dataset generation for Authentication and Authorization using Physical Layer Properties in Indoor Environment.

## Employment History (continued)

2024 – 2025

### ■ **Post Doctoral Fellowship**

Department Information System Study Program.  
Universitas Airlangga, Indonesia.

#### • **Completed Projects**

- Enhancing Smart Healthcare Systems with Machine Learning: A Cardiovascular Disease Prevention.
- Deep Learning in Smart Healthcare: A GAN-based Approach for Imbalanced Alzheimer's Disease Classification.
- Secure Horizons: Integrating Blockchain With AI for Enhanced Smart Healthcare Systems.

2022 – 2023

### ■ **Assistant Professor**

University of Management and Technology, Pakistan.

- Head of MS(CS), BS(SE) Program.

#### **Supervision of MS(CS) Students Graduated**

- Shahid Anwar (**Thesis:** Ransomware detection in cloud computing using federated machine learning).
- Shoaib Ahmad (**Thesis:** Malware detection and classification using honeypot with enhanced random forest).
- Fiza Ashfaq (**Thesis:** Enhancing Security in 5G Edge Networks: Predicting Real-Time Zero Trust Attacks Using Machine Learning in SDN Environments).

#### **Graduate and Undergraduate Teaching**

- Machine Learning and Deep Learning, Operating System, Cyber Security, Network Security, Data Communication and Networking Security, Advanced Operating System, Research Methodology.

Supervising FYP of Graduate Students

2016 – 2022

### ■ **Data Processing Officer**

Govt. of Pakistan, Revenue Department.

#### • **Roles and Responsibilities**

- Data Management, Information Systems, Data Security, Backup and Recovery, Public Dealing.

2020 – 2022





### ■ **Visiting Lecturer and Research Assistant**

The University of Buner, Pakistan.

#### • **Roles and Responsibilities**

- Teaching to Under-Graduate, Conducting Research, Supervising Undergraduate and Graduate Students.







## Employment History (continued)

- 2019 – 2020     **Teaching Assistant**  
Sunway University, Malaysia.
- **Roles and Responsibilities**
  - Conducting Research, Teaching to Under-Graduate, Supervising MS students, Supervising FYP of Graduate Students.
- 2016 – 2017     **Visiting Lecturer**  
Govt. PG. Jahanzeb College Swat, Pakistan.
- **Roles and Responsibilities**
  - Teaching to Undergraduate Students
- 2014 – 2016     **O & A Level Teacher and Network Administrator**  
The City School Swat Campus, Pakistan.
- **Roles and Responsibilities**
  - Teaching O & A Levels Students, Network Design and Implementation, Network Maintenance.
- 2013 – 2015     **Network Administrator**  
Maxtech Institute, Virtual University Campus Mingora, Swat, Pakistan.
- **Roles and Responsibilities**
  - Network Design and Implementation, Network Maintenance and Security.

## Workshops

-  1-Day Faculty/Quality Directions Training on "Outcome Based Education" at UMT, Sialkot, Pakistan. **(By Pakistan Engineering Council)**
-  One Day Hands-on Training Workshop of OBE, for faculty members at UMT, Sialkot, Pakistan. **(Speaker: Dr. Abdul Ahad)**
-  "Writing Top-Notch Research Papers: A Workshop for Quality and Excellence" for faculty members and students at UMT, Sialkot, Pakistan. **(Speaker: Dr. Abdul Ahad)**
-  "Streamlining Your Writing with Overleaf/LaTeX: A Workshop for Effortless Document Creation" for faculty members and students at UMT, Sialkot, Pakistan. **(Speaker: Dr. Abdul Ahad)**
-  "Launching Your Research Journey: A Workshop on Initiating Studies and Spotting Research Opportunities" for faculty members and students at UMT, Sialkot, Pakistan. **(Speaker: Dr. Abdul Ahad)**
-  "Launching Your Research Journey: A Workshop on Initiating Studies and Spotting Research Opportunities" for faculty members and students at UMT, Sialkot, Pakistan. **(Speaker: Dr. Abdul Ahad)**
-  "Unveiling the Causes of Delay in Attaining PhD and Master's Degrees: Strategies and Solutions for Timely Completion" for students at Govt, Degree College, Kabal, Swat, Pakistan. **(Speaker: Dr. Abdul Ahad)**
-  "Empowering Your Academic Writing with Overleaf/LaTeX: Workshop" at Taylor's University of Malaysia. **(Speaker: Dr. Abdul Ahad)**
-  "Advancing Smart Healthcare: Machine and Deep Learning Innovations" at Impact Lab- Digital Health and Innovations, Taylor's University of Malaysia. **(Speaker: Dr. Abdul Ahad)**
-  "Securing Smart Healthcare: Machine and Deep Learning Approaches in Cybersecurity" at Center of Smart Society CSS-5.0, Taylor's University of Malaysia. **(Speaker: Dr. Abdul Ahad)**





## Research Projects and Funds

- 2023 – Present      **European Cooperation in Science and Technology: COST Action CA22104**  
Behavioral Next Generation in Wireless Networks for Cyber Security (BEiNG-WISE).
- 2024 – 2025      **Project Reference: 2023.10865.CPCA.A2**  
Secure Horizons: Transforming Healthcare with Federated Learning and Cloud Computing.  
INCD Cirrus: HPC, 100 000 CPU core.hours 1024GB disk
- 2024 – Present      **European Cooperation in Science and Technology: COST Action CA21153**  
Network for implementing multi-omic approaches in atherosclerotic cardiovascular disease prevention and research.
- 2022 – 2024      **European Cooperation in Science and Technology: COST Action CA20104**  
Network on evidence-based physical activity in old age (PhysAgeNet).
-  **European Cooperation in Science and Technology: COST Action CA19121**  
Network on Privacy-Aware Audio- and Video-Based Applications for Active and Assisted Living (GoodBrother).
-  **European Cooperation in Science and Technology: COST Action CA19136**  
International Interdisciplinary Network on Smart Healthy Age-friendly Environments (NET4AGE-FRIENDLY).

## Member of Conferences

-  **IEEE Conference Turkey 2023: The 10<sup>th</sup> International Conference on Wireless Networks and Mobile Communications**  
(Workshop Chair, Sessions Chair, Reviewer).
-  **EAI HealthyIoT Conference Portugal 2023: 10<sup>th</sup> EAI International Conference on IoT Technologies for HealthCare**  
(Technical Committee Member, Sessions Chair, Reviewer).
-  **EAI GOODTECHS Conference Portugal 2023: 9<sup>th</sup> EAI International Conference on Smart Objects and Technologies for Social Good**  
(Technical Committee Member, Sessions Chair, Reviewer).
-  **IEEE Conference Saudi Arabia 2023: International Conference on Smart Computing and Application**  
(Workshop Chair, Sessions Chair, Reviewer).
-  **9<sup>th</sup> International Lecture Series of School of Software, Northwestern Polytechnical University, Xian, China**  
(Sessions Chair).
-  **The First International Conference on Generative AI: Current Research, Industry Trends, and Innovations (FICAI2025), Tripoli, Libya.**  
(Editorial Board Member, Sessions Chair, Reviewer).

## Academic and Guest Editor

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|---|---|
| Academic Editor                           |  PlosOne Journal, SCIE Indexed.                        |
| Editorial Board Memeber (Young Scientist) |  Journal of Medical Data Mining (MDM), Scopus Indexed. |
| Guest Editor                              |  MDPI SENSORS, SCIE INDEXED.                           |
|   |  Mdpi Electronics, SCIE Indexed.                       |

## Research Collaborators

2022 – Present	■ <b>University of Turku, Finland</b> Cyber-Security Engineering Lab, Department of Computing.
2023 – Present	■ <b>Cardiff Metropolitan University, UK</b> Department of Electronics and Computer Systems.
2024 – Present	■ <b>Universitas Airlangga, Indonesia</b> Information System Study Program, Department of Science and Technology.
2023 – Present	■ <b>Anwar Clinical Laboratory and Hospital, Pakistan</b> Anwar Clinical Laboratory (ACL) is a multi-disciplinary lab and Hospital located in the core area of Swat District (KP), providing its services in healthcare since 1992.
	■ <b>Polytechnic University of Leiria, Portugal</b> Institute for Systems Engineering and Computers at Coimbra.
	■ <b>Universidade de Aveiro, Portugal</b> Instituto de Telecomunicações, Escola Superior de Tecnologia e Gestão de Águeda.
2022 – Present	■ <b>Taylor's University of Malaysia</b> Taylor's Impact Lab- Digital health and Innovations. Center of Smart Society - CSS-5.0.

## Miscellaneous Experience

### Awards and Achievements

2018 – 2021	■ <b>Merit Award</b> , Sunway Ph.D. Studentship worth MYR 150,000 approx..
2015 – 2017	■ <b>Merit Award</b> , VU MS Scholarship worth PKR 200,000.
2018 – 2021	■ <b>Award</b> , Sunway University Journals and Conferences grant of MYR 50,000.
2020 – 2021	■ <b>Merit Award</b> , Best Teaching and Research Assistant award by the University of Buner, Pakistan.
2019 – 2020	■ <b>Merit Award</b> , Outstanding Leadership award by Sunway University of Malaysia.
2017 – 2018	■ <b>Merit Award</b> , Best Leadership award by Govt. of Pakistan, Revenue Department.
2022 – 2023	■ <b>Merit Award</b> , Excellence Research Award for a high number of publications and citations by UMT, Sialkot, Pakistan.
2023 – 2023	■ <b>Merit Award</b> , Faculty Excellence Award for International Research Collaboration, by UMT, Sialkot, Pakistan.
2024 – 2025	■ <b>Merit Award</b> , Gold Medal for Outstanding Performance in Professional Research Collaboration by Chongqing Delp Network Technology Co., Ltd., China.

## Areas of Interest

- Research interests include 5G, 6G, Cyber Security, Internet of Things, Smart Healthcare, Smart Cities, Wireless Networks, Wireless Body Area Networks (WBAN), Security and Privacy, Intelligent Transportation, Machine Learning, Deep Learning and Artificial Intelligence.

## Journal Reviewer

- I regularly review many journals and conferences including Future Generation Computer Systems (FGCS), Health Information Science and Systems (HISC), IEEE Internet of Things, IEEE Access, IEEE Sensor, Computer Networks, Internet of Things (Elsevier), Connection Sciences, PeerJ: Computer Sciences, International Journal of Distributed Sensor Networks, Applied Sciences, MDPI Sensors, Array and others.

## Research Publications

### Journal Articles

- 1 **Ahad,A.**, Wajahat, A., Ahmed, M. S., Kazi Istiaque Aman, Ullah, F., & Tahir, M. (2026). Federated learning and 5g/6g-based internet of medical things (iomt): Applications, key enabling technologies, open issues and future research directions. *WIREs Data Mining and Knowledge Discovery*. (IF = 11.7, SCIE Indexed, Accepted).
- 2 Wajahat, A., Zhang, K., Latif, J., Ma, X., **Ahad,A.**, & Ahmed, K. I. (2026). Dynamic weighted federated learning: A scalable and privacy-centric approach to android iot malware detection. *Concurrency and Computation: Practice and Experience*, 38(1), e70441. (IF = 1.5, SCIE Indexed).
- 3 **Ahad,A.**, Jiangbin, Z., Ahmed, S., Kazi Istiaque Ullah, Ullah, F., & Abdullah. (2025). Cardiovascular disease prediction using advanced optimization methods in artificial neural networks: Implementation, performance analysis, challenges, and future opportunities. *Archives of Computational Methods in Engineering*. (IF = 12.1, SCIE Indexed).
- 4 **Ahad,A.**, Puspitasari, I., Zheng, J., Ullah, S., Ullah, F., Bakhsh, S. T., & Pires, I. M. (2025). Machine learning stroke prediction in smart healthcare: Integrating fuzzy k-nearest neighbor and artificial neural networks with feature selection techniques. *Computers, Materials & Continua*, 82(3). (IF = 2.1, SCIE Indexed).
- 5 Ashfaq, F., Wasim, M., Shah, M. A., **Ahad,A.**, & Pires, I. M. (2025). Enhancing security in 5g edge networks: Predicting real-time zero trust attacks using machine learning in sdn environments. *Sensors*, 25(6), 1905. (IF = 3.5, SCIE Indexed).
- 6 Shahzad, K., Khashir, A., Tufail, H., **Ahad,A.**, Ali, Z., Madeira, F., & Pires, I. M. (2025). Federated convolutional neural networks (f-cnns) for privacy-preserving multi-class skin lesion classification. *Array*, 100667. (IF = 4.5, ESCI Indexed).
- 7 **Ahad,A.**, Jiangbina, Z., Tahir, M., Shayea, I., Sheikh, M. A., & Rasheed, F. (2024). 6g and intelligent healthcare: Taxonomy, technologies, open issues and future research directions. *Internet of Things*, 101068. (IF = 7.6, SCIE Indexed).
- 8 Ahmed, K. I., Tahir, M., Lau, S. L., Habaeabi, M. H., **Ahad,A.**, & Mughees, A. (2024). Trust-aware authentication and authorization for iot: A federated machine learning approach. *IEEE Internet of Things Journal*. (IF = 8.9, SCIE Indexed).
- 9 Ahmed, K. I., Tahir, M., Lau, S. L., Habaeabi, M. H., **Ahad,A.**, & Pires, I. M. (2024). Dataset for authentication and authorization using physical layer properties in indoor environment. *Data in Brief*, 110589. (IF = 2.1, ESCI Indexed).
- 10 Li, Z., Chamran, K., Alobaedy, M. M., Sheikh, M. A., Siddiqui, T., & **Ahad,A.** (2024). An optimization on 2d-slam map construction algorithm based on lidar. *Journal of Intelligent & Robotic Systems*, 110(4), 1–23. (IF = 3.2, SCIE Indexed).
- 11 Qaiser, F., Hussain, M., **Ahad,A.**, & Pires, I. M. (2024). Controller-driven vector autoregression model for predicting content popularity in programmable named data networking devices. *PeerJ Computer Science*, 10, e1854. (IF = 3.8, SCIE Indexed).



- 12 Tufail, H., **Ahad,A.**, Naqvi, M. H., Maqsood, R., & Pires, I. M. (2024). Classification of vascular dementia on magnetic resonance imaging using deep learning architectures. *Intelligent Systems with Applications*, 22, 200388. (IF = 4.3, ESCI Indexed).
- 13 Ullah, S., Li, J., Chen, J., ALL, I., Khan, S., **Ahad,A.**, ... Leung, V. (2024). A survey on emerging trends and applications of 5g and 6g to healthcare environments. *ACM Computing Surveys*. (IF = 28, SCIE Indexed).
- 14 Ullah, S., Li, J., Ullah, F., Chen, J., Ali, I., **Ahad,A.**, & Leung, V. C. (2024). The revolution and vision of explainable ai for android malware detection and protection. *Internet of Things*, 101320. (IF = 7.6, SCIE Indexed).
- 15 **Ahad,A.**, Ali, Z., Mateen, A., Tahir, M., Hannan, A., Garcia, N. M., & Pires, I. M. (2023). A comprehensive review on 5g-based smart healthcare network security: Taxonomy, issues, solutions and future research directions. *Array*, 18, 100290. (IF = 4.5, ESCI Indexed).
- 16 **Ahad,A.**, & Tahir, M. (2023). Perspective—6g and iot for intelligent healthcare: Challenges and future research directions. *ECS Sensors Plus*, 2(1), 011601. (Scopus Indexed).
- 17 Mateen, A., Wasim, M., **Ahad,A.**, Ashfaq, T., Iqbal, M., & Ali, A. (2023). Smart energy management system for minimizing electricity cost and peak to average ratio in residential areas with hybrid genetic flower pollination algorithm. *Alexandria Engineering Journal*, 77, 593–611. (IF = 6.8, SCIE Indexed).
- 18 Mughees, A., Tahir, M., Sheikh, M. A., Amphawan, A., Meng, Y. K., **Ahad,A.**, & Chamran, K. (2023). Energy-efficient joint resource allocation in 5g hetnet using multi-agent parameterized deep reinforcement learning. *Physical Communication*, 61, 102206. (IF = 2.2, SCIE Indexed).
- 19 Noreen, R., Zafar, A., Waheed, T., Wasim, M., **Ahad,A.**, Coelho, P. J., & Pires, I. M. (2023). Unraveling the inner world of phd scholars with sentiment analysis for mental health prognosis. *Behaviour & Information Technology*, 1–13. (IF = 3.32, SCIE Indexed).
- 20 Teh, P. L., Piao, S., Almansour, M., Ong, H. F., & **Ahad,A.** (2022). Analysis of popular social media topics regarding plastic pollution. *Sustainability*, 14(3), 1709. (IF = 3.7, SCIE Indexed).
- 21 **Ahad,A.**, Tahir, M., Sheikh, M. A., Ahmed, K. I., & Mughees, A. (2021). An intelligent clustering-based routing protocol (crp-gr) for 5g-based smart healthcare using game theory and reinforcement learning. *Applied Sciences*, 11(21), 9993. (IF = 2.81, SCIE Indexed).
- 22 Istiaque Ahmed, K., Tahir, M., Hadi Habaebi, M., Lun Lau, S., & **Ahad,A.** (2021). Machine learning for authentication and authorization in iot: Taxonomy, challenges and future research direction. *Sensors*, 21(15), 5122. (IF = 3.7, SCIE Indexed).
- 23 Mughees, A., Tahir, M., Sheikh, M. A., & **Ahad,A.** (2021b). Energy-efficient ultra-dense 5g networks: Recent advances, taxonomy and future research directions. *IEEE Access*, 9, 147692–147716. (IF = 3.47, SCIE Indexed).
- 24 **Ahad,A.**, Tahir, M., Aman Sheikh, M., Ahmed, K. I., Mughees, A., & Numani, A. (2020). Technologies trend towards 5g network for smart health-care using iot: A review. *Sensors*, 20(14), 4047. (IF = 3.5, SCIE Indexed).
- 25 Mughees, A., Tahir, M., Sheikh, M. A., & **Ahad,A.** (2020). Towards energy efficient 5g networks using machine learning: Taxonomy, research challenges, and future research directions. *Ieee Access*, 8, 187498–187522. (IF = 3.9, SCIE Indexed).
- 26 Tahir, M., Habaebi, M. H., Dabbagh, M., Mughees, A., **Ahad,A.**, & Ahmed, K. I. (2020). A review on application of blockchain in 5g and beyond networks: Taxonomy, field-trials, challenges and opportunities. *IEEE Access*, 8, 115876–115904. (IF = 3.9, SCIE Indexed).
- 27 **Ahad,A.**, Tahir, M., & Yau, K.-L. A. (2019). 5g-based smart healthcare network: Architecture, taxonomy, challenges and future research directions. *IEEE access*, 7, 100747–100762. (IF = 4.6, SCIE Indexed).



- 28 **Ahad,A.**, Al Faisal, S., Ali, F., Jan, B., Ullah, N. et al. (2017). Design and performance analysis of dss (dual sink based scheme) protocol for wbasns. *Advances in Remote Sensing*, 6(04), 245.
- 29 **Ahad,A.**, Tariq, L., Niaz, S., & Inam, M. (2017). Design of secure and traceable requirement engineering process for security-sensitive projects. *Journal of Software Engineering and Applications*, 10(12), 873–883.
- 30 **Ahad,A.**, Ullah, Z., Amin, B., & Ahmad, A. (2017). Comparison of energy efficient routing protocols in wireless sensor network. *Am. J. Netw. Commun*, 6, 67–73.
- 31 **Ahad,A.**, Ullah, Z., Tariq, L., & Niaz, S. (2017). Software inspections and their role in software quality assurance. *American Journal of Software Engineering and Applications*, 9(2), 105–110.

## Conference Proceedings

- 1 **Ahad,A.**, Jiangbin, Z., Ahmed, K. I., Puspitasari, I., Ullah, N., & Madeira, F. (2025). Enhancing smart healthcare systems with machine learning: A cardiovascular disease prevention. (Vol. 263, pp. 342–349). Elsevier.
- 2 Ali, Z., Ali, A., **Ahad,A.**, Madeira, F., Mehmood, B., & Abbas, H. (2025). An iot-based framework for infant vital signs monitoring with amazon web services (aws) lambda. In *Iberian conference on information systems and technologies* (pp. 350–361). Springer.
- 3 Butt, H. A., **Ahad,A.**, Razzaq, A., Mehedi, I. M., Shayea, I., & Pires, I. M. (2025). Hybrid machine learning and deep learning model for efficient ddos attack detection in software-defined networks. In *Iberian conference on information systems and technologies* (pp. 28–39). Springer.
- 4 Ashfaq, F., **Ahad,A.**, Hussain, M., Shayea, I., & Pires, I. M. (2024). Enhancing zero trust security in edge computing environments: Challenges and solutions. In *World conference on information systems and technologies* (pp. 433–444). Springer.
- 5 Imran, A., Chaudhary, H., Tariq, M., Ali, Z., **Ahad,A.**, Naqvi, H., ... Pires, I. M. (2024). Brain-controlled computer tasks for paralyzed persons: Framework overview. (Vol. 237, pp. 28–35). Elsevier.
- 6 Jiyad, Z. M., Al Maruf, A., Haque, M. M., Gupta, M. S., **Ahad,A.**, & Aung, Z. (2024). Ddos attack classification leveraging data balancing and hyperparameter tuning approach using ensemble machine learning with xai. In *2024 third international conference on power, control and computing technologies (icpc2t)* (pp. 569–575). IEEE.
- 7 Tufail, H., **Ahad,A.**, Puspitasari, I., Shayea, I., Coelho, P. J., & Pires, I. M. (2024). Deep learning in smart healthcare: A gan-based approach for imbalanced alzheimer's disease classification. (Vol. 241, pp. 146–153). Elsevier.
- 8 Aborujilah, A., Alashbi, A., Shayea, I., Mohamed, A. H., Alhammadi, A., El-Saleh, A. A., & **Ahad,A.** (2023). Iot integration in agriculture: Advantages, challenges, and future perspectives: Short survey. In *2023 10th international conference on wireless networks and mobile communications (wincom)* (pp. 1–7). IEEE.
- 9 **Ahad,A.**, Bakar, R. A., Arslan, M., & Ali, M. H. (2023). Dpidns: A deep packet inspection based ips for security of p4 network data plane. In *2023 international conference on smart computing and application (icsca)* (pp. 1–8). IEEE.
- 10 Alashbi, A., Mohamed, A. H., Shayea, I., El-Saleh, A. A., & **Ahad,A.** (2023). A review of iot applications in smart environments: From smart cities to military integration. In *International conference of reliable information and communication technology* (pp. 176–190). Springer.
- 11 Ali, Z., **Ahad,A.**, Madeira, F., & Shayea, I. (2023). Enhancing transparency and trustworthiness of healthcare iot data with aws: A proposed model. In *Eai international conference on iot technologies for healthcare* (pp. 44–56). Springer.
- 12 Ali, Z., **Ahad,A.**, Shayea, I., & Pires, I. M. (2023). Improving accuracy in cloud service provider ranking: Integrating topsis with caiq-based qos assessment. In *2023 10th international conference on wireless networks and mobile communications (wincom)* (pp. 1–6). IEEE.

- 13 Anwar, S., **Ahad,A.**, Hussain, M., Shayea, I., & Pires, I. M. (2023). Ransomware detection and classification using ensemble learning: A random forest tree approach. In *2023 10th international conference on wireless networks and mobile communications (wincom)* (pp. 1–6). IEEE.
- 14 Arslan, M., Bakar, R. A., & **Ahad,A.** (2023). Efficient traffic management for resolving traffic congestion on motorways. In *2023 international conference on smart computing and application (icsca)* (pp. 1–8). IEEE.
- 15 Ashfaq, F., **Ahad,A.**, Hussain, M., & Madeira, F. (2023). Transforming diabetes care: A review of iot-based mobile health systems. In *Eai international conference on iot technologies for healthcare* (pp. 14–32). Springer.
- 16 Butt, H. A., **Ahad,A.**, Wasim, M., Madeira, F., & Chamran, M. K. (2023). 5g and iot for intelligent healthcare: Ai and machine learning approaches—a review. In *International conference on smart objects and technologies for social good* (pp. 107–123). Springer.
- 17 Butt, H. A., **Ahad,A.**, Wasim, M., Shayea, I., Coelho, P. J., Pires, I. M., & Garcia, N. M. (2023). Federated machine learning in 5g smart healthcare: A security perspective review. (Vol. 224, pp. 580–586). Elsevier.
- 18 Mateen, A., **Ahad,A.**, Zia, S., Shayea, I., & Ali, S. (2023). Energy-efficient routing to prevent void holes in heterogeneous 5g wireless sensor network using game theory. In *2023 international conference on smart computing and application (icsca)* (pp. 1–6). IEEE.
- 19 **Ahad,A.**, Tahir, M., Sheikh, M. A. S., Mughees, A., & Ahmed, K. I. (2021). Optimal route selection in 5g-based smart health-care network: A reinforcement learning approach. In *2021 26th ieee asia-pacific conference on communications (apcc)* (pp. 248–253). IEEE.
- 20 Mughees, A., Tahir, M., Sheikh, M. A., & **Ahad,A.** (2021a). Energy-efficient load-aware user association in ultra-dense wireless network. In *2021 26th ieee asia-pacific conference on communications (apcc)* (pp. 254–259). IEEE.
- 21 **Ahad,A.**, Tahir, M., Sheikh, M. A. S., Hassan, N., Ahmed, K. I., & Mughees, A. (2020). A game theory based clustering scheme (gcs) for 5g-based smart healthcare. In *2020 ieee 5th international symposium on telecommunication technologies (istt)* (pp. 157–161). IEEE.

## Books and Chapters

- 1 **Ahad,A.**, Jiangbin, Z., Wajahat, A., Khan, S. U., Tahir, M., & Sheikh, M. A. (n.d.). Cybersecurity for internet of things: Big data optimization for iot-based real-time network traffic analysis. IET.
- 2 **Ahad,A.**, Jiangbin, Z., Mughees, A., Puspitasari, I., & Tayyab, M. (2025). Secure horizons: Integrating blockchain with ai for enhanced smart healthcare systems. In *Ai techniques for securing medical and business practices* (pp. 357–390). IGI Global.
- 3 **Ahad,A.**, & Ullah, F. (2025). *Ai and blockchain applications for privacy and security in smart medical systems*. IGI Global Scientific Publishing.
- 4 Butt, H. A., Imran, I., **Ahad,A.**, Farid, J., & Madeira, F. (2025). Iot and wearable devices: Security challenges and solutions. In *Ai and blockchain applications for privacy and security in smart medical systems* (pp. 243–278). IGI Global Scientific Publishing.
- 5 Butt, H. A., Rashid, Z., **Ahad,A.**, Yousaf, A., & Imran, I. (2025). Privacy-preserving machine learning models for medical data ensuring security in smart healthcare systems. In *Ai and blockchain applications for privacy and security in smart medical systems* (pp. 339–370). IGI Global Scientific Publishing.
- 6 Jafri, N., Tahir, M., & **Ahad,A.** (2023). The role of artificial intelligence in solar harvesting, storage, and conversion. In *Solar energy harvesting, conversion, and storage* (pp. 293–318). Elsevier.

## Skills

Languages	Strong reading, writing and speaking competencies for English, Urdu and Phushto.
Computer Skills	Networking, Java, PHP, Matlab, C/C++, Python, TensorFlow, PyTorch.
Web Dev	HTML, CSS.
Misc.	Academic research, teaching, training, consultation, typesetting and publishing.

## Extra Activities

Sports	Badminton, Archery, Baseball, Bowling, Cricket, Dodge ball, Football.
Hobbies	Biking, Fishing, Hiking, Running, Video Editing.
Research	Engineering Research, Humanities Research, Medical Research, Scientific Research.
Writing	Book Reviews, Sports writing, Web Publication.
Community Service	Youth Sports Coaching.

## References

■ **Dr. Muhammad Tahir**

Senior Lecturer

Department of Computing and Information Systems, University of Turku, Finland.

**Email:** tahir.mohammad@utu.fi

■ **Dr. Muhammad Seikh Aman**

Senior Lecturer

Department of Electronics and Computer Systems, Cardiff Metropolitan University, UK.

**Email:** msheikh@cardiffmet.ac.uk

■ **Dr. Niamat Ullah**

Professor

Department of Computing and Information Systems, Buner University, Pakistan.

**Email:** niamatuob@ubuner.edu.pk

■ **Dr. Muhammad Naveed Aman**

Assistant Professor

School of Computing, University of Nebraska-Lincoln, NY, USA.

**Email:** naveed.aman@unl.edu

■ **Dr. Ivan Miguel Pires**

Professor

Instituto de Telecomunicações, Escola Superior de Tecnologia e Gestão de Águeda, Universidade de Aveiro, Águesa, Portugal.

**Email:** impires@ua.pt