
FARHAN ULLAH

Professional Experience

- 3/2024—till date Department of Computer Science, University of Camerino, Camerino, Italy.
- 07/2020-3/2024 Associate Professor, School of Software, Northwestern Polytechnical University (NPU), Xian, China
Ranking (2024): Times Higher Edu: 301-350, QS Ranking: 601-630
- 02/2015-08/2017 Lecturer in Computer Science Department, COMSATS University Islamabad, Sahiwal Campus, Pakistan
COMSATS University Islamabad Ranking (2024): Times Higher Edu: 601-800, QS Ranking: 651-660
- 10/2014-02/2015 Lecturer in Computer Science Department, Barani Institute of Management Sciences (BIMS), (A Joint Venture of Arid Agriculture University Rawalpindi, Pakistan)
- 01/2013-09/2014 Network Engineer, FIFA, FATA Secretariat Warsak Road, Peshawar, Pakistan
- 01/2011-04/2013 Lecturer, CECOS University, Peshawar, Pakistan

Courses Taught

Undergraduate Courses:

- Software Project Organization and Management-1
- Fundamental of Software Engineering
- Software Security
- Object Oriented Programming
- Introduction to Machine Learning
- Data Communication and Networks

Graduate Courses:

- Software Project Organization and Management-2
- Introduction to Cybersecurity
- Joint Human Machine Learning
- Deep Learning Specialization
- Network and Distributed Computing
- Introduction to Large Language Models (LLMs)
- Networking Configuration Routers and Switches

Developed Courses

- Software Project Organization and Management-1
- Introduction to Cybersecurity
- Joint Human Machine Learning
- Deep Learning Specialization
- Introduction to Large Language Models (LLMs)
- Networking Configuration Routers and Switches

Community Services / Committees

- Departmental Committee: Examiner (member)
- Final Year Project Committee: Project Evaluator (member)
- Batch Advisor: Students' Counselling, Guidance and Management (head)

- Course Advisor Committee: Guidance, and Modification (member)
- Welcome and Farewell Party Committee: Organization and Management (member)
- School Research Committee: Research Discussions and Guidance (member)
- Departmental Management Committee: Management (member)
- National Computing Education Accreditation (NCEAC) Committee: Member
- Design, Innovate, Communicate, Entertain (DICE) Organization Committee: Member
- School Presenter to Overseas Students: Member

Supervisor/Co-Supervisor

Research Thesis Supervision / Co-Supervision (Master Degree Students)

- Mutumba Jonathan (2023): Automated Malware Detection and Classification using Multi-modal Data Representation
- Muhammad Hamza Akbar (2022), "Deep reinforcement learning based approach for grammatical error correction"
- Muhammad Nabeel Raza (2022), "Fake news detection using transformer based transfer learning"
- Muhammad Yousaf (2022), "Student Attention-aware Deep Reinforcement Learning Model using Facial Expression and EEG Brain Signals"
- Saima Saddiq (2017), "Developing Formal Model for Semantics of Smart Logistics in Web of Things"
- Shabina Farooq (2017), "Towards Developing Formal Model for Semantic Web Ontology for Smart Homes in Web of Things"
- Umbar Noureen Abbass (2016), "Formal Model of smart traffic monitoring and guidance system"
- Sajeel ur Rehman, Tehreem Qamar (2016), "Old Age Home Patient Monitoring System Through Internet of Things (IoT)"

Project Supervision / Co-Supervision (Bachelor Degree Students)

- Farhan Ali, Yasir Ali, Azfar Tariq, "Social Services Ranking"
- Waqas Saeed, Muhammad Latif, "Student and Teacher Notification System"
- Ayesha Ashfaq, "Online Shopping system with face detection login"
- Faisal Khan, "Online railway reservation system"

Education

09/2017-06/2020

Ph.D. (Doctor of Engineering in Computer Science and Technology)
Sichuan University, Chengdu, China (<http://www.scu.edu.cn/>)

Sichuan University Ranking (2024): Times Higher Edu: 150th, QS Ranking: 355

[Medium of Instruction: **English**] [Course Work Percentage: **A**]

Study emphases: Program Analysis, Malware Analysis, Data Science, Deep Learning

» **Doctoral Thesis:** "Title: Multi-Programming Source Code Plagiarism Detection in Educational Assignments"

Key features of research are:

- Emphasizes the utilization of software code forensics
- Considers the challenges specific to multilingual development environments
- Source Code Authorship Attribution (SCAA) across different source codes using scalable Deep learning model and Graph analysis
- Structural analysis of different types, i.e. C++, Java, C#, of source codes using Abstract Syntax Tree (AST)
- Semantic analysis of different types of source codes using Program Dependence Graph (PDG)
- Machine and Deep learning approaches software forensics and SCAA
- Evaluate all frameworks for code plagiarism using different public and private datasets.

09/2009-07/2012

Master of Science (Computer Science)

CECOS University, Hayatabad Phase 6, Peshawar, KPK, Pakistan,
(<http://www.cecos.edu.pk/>)

[Medium of Instruction: **English**] [Grade: **A**]

Key Courses are:

- Advanced Analysis of Algorithm
- Advanced Software Engineering
- Advanced Theory of Computation

- Advanced Computer Architecture
- Semantic Web
- Advanced Computer Network Security
- Wireless Communication

09/2005-09/2008

Bachelor of Science (Computer Science)

Peshawar University, Peshawar, KPK, Pakistan (<http://www.uop.edu.pk/>)

[Medium of Instruction: **English**] [Grade: **A**]

Research Publications

SCI/SCIE Publications

1. **Farhan Ullah**, Leonardo Mostarda, D. Cacciagrano, M. J. F. Alenazi, C. -M. Chen and S. Kumari, "Federated Edge Intelligence for Enhanced Security in Consumer Intermittent Healthcare Devices Using Adversarial Examples," in IEEE Transactions on Consumer Electronics,(URL: doi: 10.1109/TCE.2024.3511615) (<https://ieeexplore.ieee.org/abstract/document/10778269>)
2. **Farhan Ullah**, Leonardo Mostarda, Diletta Cacciagrano, Chien-Ming Chen, Mohammed Amoon, and Saru Kumari. "Metaheuristic-Driven Secure Task Optimization for Consumer Edge Devices." IEEE Consumer Electronics Magazine (2024). (URL: doi: 10.1109/MCE.2024.3467768)
3. **Farhan Ullah**, Diletta Cacciagrano, Chien-Ming Chen, and Saru Kumari. "Semantic-based Federated Defense for Distributed Malicious Attacks." IEEE Consumer Electronics Magazine (2024)., doi: 10.1109/MCE.2024.3431792. (URL: <https://ieeexplore.ieee.org/abstract/document/10606008>)
4. **Farhan Ullah**, Gautam Srivastava, Leonardo Mostarda, and Diletta Cacciagrano. "Collaborative Intrusion Detection System for Intermittent 10 Vs Using Federated Learning and Deep Swarm Particle Optimization." In 2024 IEEE 11th International Conference on Data Science and Advanced Analytics (DSAA), pp. 1-8. IEEE, 2024. (URL: doi: [10.1109/DSAA61799.2024.10722781](https://doi.org/10.1109/DSAA61799.2024.10722781))
5. **Farhan Ullah**, Gautam Srivastava, Shamsher Ullah, Kenji Yoshigoe, and Yue Zhao. "NIDS-VSB: Network Intrusion Detection System for VANET using Spark-Based Big Data Optimization and Transfer Learning." **IEEE Transactions on Consumer Electronics (2023)**. (SCI, IF: 4.3, Q1) (URL: <https://ieeexplore.ieee.org/document/10299718>)
6. Yang, Yang, Haitao Shang, Nasir Jamal, and Farhan Ullah. "Video resources recommendation for online tourism teaching in interactive network." Mobile Networks and Applications (2023): 1-12. **Springer**. (SCI, IF: 3.8, Q2) (<https://link.springer.com/article/10.1007/s11036-023-02193-9>)
7. Iqbal, Muhammad Jamshaid, Muhammad Farhan, **Farhan Ullah**, Gautam Srivastava, and Sohail Jabbar. "Intelligent multimedia content delivery in 5G/6G networks: A reinforcement learning approach." Transactions on Emerging Telecommunications Technologies (2023), **Wiley**. (SCI, IF: 3.31, Q2) (URL: <https://onlinelibrary.wiley.com/doi/10.1002/ett.4842>)
8. **Farhan Ullah**., Ullah, S., Srivastava, G. et al. NMal-Droid: network-based android malware detection system using transfer learning and CNN-BiGRU ensemble. Wireless Networks (2023). <https://doi.org/10.1007/s11276-023-03414-5>, **Springer**. (SCI, IF: 3.0, Q2) (URL: <https://link.springer.com/article/10.1007/s11276-023-03414-5>)
9. **Farhan Ullah**, Gautam Srivastava, Heng Xiao, Shamsher Ullah, Jerry Chun-Wei Lin, and Yue Zhao. "A Scalable Federated Learning Approach for Collaborative Smart Healthcare Systems with Intermittent Clients using Medical Imaging." **IEEE Journal of Biomedical and Health Informatics** (2023). doi: 10.1109/JBHI.2023.3282955. (SCI, IF: 7.7, Q1) (URL: <https://ieeexplore.ieee.org/document/10144616>)
10. Hamad Naeem, Shi Dong, Olorunjube James Falana, and **Farhan Ullah**. "Development of a Deep Stacked Ensemble With Process Based Volatile Memory Forensics for Platform Independent Malware Detection and Classification." Expert Systems with Applications (2023):119952, **Elsevier**. (SCI, IF:8.665, Q1) (URL: <https://www.sciencedirect.com/science/article/pii/S0957417423004542>)
11. Din, Nizamud, Abdul Waheed, Shamsher Ullah, Noor Ul Amin, Gautam Srivastava, **Farhan Ullah**, and Jerry Chun-Wei Lin. "A typology of secure multicast communication over 5 G/6 G networks." International Journal of Information Security (2023): 1-19. **Springer**. (SCI, IF: 2.427, Q1) (URL: <https://link.springer.com/article/10.1007/s10207-023-00678-y>)

12. **Farhan Ullah**, Shamsher Ullah, Gautam Srivastava, and Jerry Chun-Wei Lin. "IDS-INT: Intrusion detection system using transformer-based transfer learning for imbalanced network traffic." *Digital Communications and Networks* (2023), **Elsevier**. (SCI, IF: 7.9, Q1) (URL: <https://www.sciencedirect.com/science/article/pii/S2352864823000640>)
13. **Farhan Ullah**, Xiaochun Cheng, Leonardo Mostarda, and Sohail Jabbar. "Android-IoT Malware Classification and Detection Approach Using Deep URL Features Analysis." *Journal of Database Management (JDM)* 34, no. 2 (2023): 1-26. **IGI Global**, (SCI, CCF C, IF: 2.656, Q2), (URL: <https://www.igi-global.com/article/android-iot-malware-classification-and-detection-approach-using-deep-url-features-analysis/318414>)
14. Shamsher Ullah, Jiangbin Zheng, Nizamud Din, Muhammad Tanveer Hussain, **Farhan Ullah**, and Mahwish Yousaf. "Elliptic Curve Cryptography; Applications, challenges, recent advances, and future trends: A comprehensive survey." *Computer Science Review* 47 (2023): 100530. **Elsevier**, (SCI, IF: 8.757, Q1) (URL: <https://www.sciencedirect.com/science/article/pii/S1574013722000648>)
15. **Farhan Ullah**, Shamsher Ullah, Gautam Srivastava, and Jerry Chun-Wei Lin. "Droid-MCFG: Android malware detection system using manifest and control flow traces with multi-head temporal convolutional network." *Physical Communication* 57 (2023): 101975. **Elsevier**, (SCI, IF: 2.379, Q2) (URL: <https://www.sciencedirect.com/science/article/pii/S187449072200252X>)
16. **Farhan Ullah**, Srivastava, G. and Ullah, S., 2022. A malware detection system using a hybrid approach of multi-heads attention-based control flow traces and image visualization. *Journal of Cloud Computing*, 11(1), pp.1-21, **Springer**, (SCI, IF: 3.418, Q1) (URL: <https://journalofcloudcomputing.springeropen.com/articles/10.1186/s13677-022-00349-8>)
17. Shamsher Ullah, Zheng Jiangbin, Muhammad Tanveer Hussain, Nizamud Din, **Farhan Ullah**, and Muhammad Umar Farooq. "A perspective trend of hyperelliptic curve cryptosystem for lighted weighted environments." *Journal of Information Security and Applications* 70(2022): 103346. **Elsevier**, (CCF: C, SCI, IF: 4.96, Q1) (URL: <https://www.sciencedirect.com/science/article/abs/pii/S2214212622001910>)
18. Bukhari, Maryam, Sadaf Yasmin, Adnan Habib, Xiaochun Cheng, **Farhan Ullah**, Jaeseok Yoo, and Daewon Lee. "A Novel Framework for Melanoma Lesion Segmentation Using Multiparallel Depthwise Separable and Dilated Convolutions with Swish Activations." *Journal of Healthcare Engineering* 2023 (2023). (SCI, IF: 3.822, Q2) (URL: <https://www.hindawi.com/journals/jhe/2023/1847115/>)
19. **Farhan Ullah**, Amjad Alsirhani, Mohammed Mujib Alshahrani, Abdullah Alomari, Hamad Naeem, and Syed Aziz Shah. "Explainable Malware Detection System Using Transformers-Based Transfer Learning and Multi-Model Visual Representation." *Sensors* 22, no. 18 (2022): 6766. (SCI, IF: 3.847, Q1) (URL: <https://www.mdpi.com/1424-8220/22/18/6766>)
20. Naeem, Hamad, Bandar M. Alshammari, and **Farhan Ullah**. "Explainable Artificial Intelligence-Based IoT Device Malware Detection Mechanism Using Image Visualization and Fine-Tuned CNN-Based Transfer Learning Model." *Computational Intelligence and Neuroscience* 2022 (2022). (SCI, IF: 3.120) (URL: <https://www.hindawi.com/journals/cin/2022/7671967/>)
21. **Farhan Ullah**, Shamsher Ullah, Muhammad Rashid Naeem, Leonardo Mostarda, Seungmin Rho, and Xiaochun Cheng. "Cyber-threat detection system using a hybrid approach of transfer learning and multi-model image representation." *Sensors* 22, no. 15 (2022): 5883. (SCI, IF: 3.847, Q1) (URL: <https://www.mdpi.com/1424-8220/22/15/5883>)
22. Naeem, Hamad, Xiaochun Cheng, **Farhan Ullah**, Sohail Jabbar, and Dong Shi. "A Deep Convolutional Neural Network Stacked Ensemble for Malware Threat Classification in Internet of Things." *Journal of Circuits, Systems and Computers* (2022). (SCI, IF: 1.333, Q3), (URL: <https://www.worldscientific.com/doi/10.1142/S0218126622503029>)
23. Ali, Rahman, Asmat Ali, Farkhund Iqbal, Mohammed Hussain, and **Farhan Ullah**. "Deep Learning Methods for Malware and Intrusion Detection: A Systematic Literature Review." *Security and Communication Networks* (2022). (SCI, IF: 1.968, Q2) (URL: <https://www.hindawi.com/journals/scn/2022/2959222/>)
24. **Farhan Ullah**, Jihoon Moon, Hamad Naeem, and Sohail Jabbar. "Explainable artificial intelligence approach in combating real-time surveillance of COVID19 pandemic from CT scan and X-ray images using ensemble model." *The Journal of Supercomputing* (2022): 1-26, **Springer**, (CCF C, SCI, IF: 2.474, Q2) (URL: <https://link.springer.com/article/10.1007/s11227-022-04631-z>)
25. **Farhan Ullah**, Muhammad Rashid Naeem, Hamad Naeem, Xiaochun Cheng, and Mamoun Alazab. "CroLSSim: Cross-language software similarity detector using hybrid approach of LSA-based AST-MDrep features and CNN-LSTM model." *International Journal of Intelligent Systems* (2022), Wiley. (SCI, IF: 8.709, Q1) (URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/int.22813>)
26. **Farhan Ullah**, Naeem, M. R., Bajahzar, A. S., & Al-Turjman, F. (2021). IoT-based Cloud Service for Secured Android Markets using PDG-based Deep Learning Classification. *ACM Transactions on Internet Technology (TOIT)*, 22(2), 1-17. (CCF B, SCI, IF: 3.135, Q1) (URL: <https://dl.acm.org/doi/10.1145/3418206>)
27. **Farhan Ullah**, Sohail Jabbar, and Leonardo Mostarda. "An intelligent decision support system for software plagiarism detection in academia." *International Journal of Intelligent Systems*, Wiley, (IF: 10.312, SCI, Q1) (URL: <https://onlinelibrary.wiley.com/doi/10.1002/int.22399>)

28. **Farhan Ullah**, Muhammad Rashid Naeem, Leonardo Mostarda, and Syed Aziz Shah. "Clone detection in 5G-enabled social IoT system using graph semantics and deep learning model." *International Journal of Machine Learning and Cybernetics*, **Springer**:1-13 (IF: 3.75, SCI, Q1) (URL: <https://link.springer.com/article/10.1007/s13042-020-01246-9>)
29. **Farhan Ullah**, Fadi Al-Turjman, and Anand Nayyar. "IoT-based green city architecture using secured and sustainable android services." *Environmental Technology & Innovation*, **Elsevier** (2020): 101091. (IF: 7.1, SCI, Q1) (URL: <https://www.sciencedirect.com/science/article/abs/pii/S2352186420313912>)
30. **Farhan Ullah**, Sohail Jabbar, and Fadi Al-Turjman. "Programmers' de-anonymization using a hybrid approach of abstract syntax tree and deep learning." *Technological Forecasting and Social Change*, **Elsevier** 159 (2020): 120186. IF: 12, SCI, Q1) (URL: <https://www.sciencedirect.com/science/article/pii/S004016252031012X#!>)
31. **Farhan Ullah**, Junfeng Wang, Sohail Jabbar, Fadi Al-Turjman, Mamoun Alazab, "Source Code Authorship Attribution Using Hybrid Approach of Program Dependence Graph and Deep Learning Model", **IEEE Access** Vol 7 (2019: 141987-141999) (IF: 4.098, SCI, Q1) (URL: <https://ieeexplore.ieee.org/document/8848478>)
32. **Farhan Ullah**, Hamad Naeem, Sohail Jabbar, Shehzad Khalid, Muhammad Ahsan Latif, Fadi Al-turjman, and Leonardo Mostarda. "Cyber Security Threats Detection in Internet of Things Using Deep Learning Approach." **IEEE Access** Vol 7 (2019): 124379-124389. (IF: 4.098, SCI, Q1) (URL: <https://ieeexplore.ieee.org/document/8848478>)
33. **Farhan Ullah**, Junfeng Wang, Muhammad Farhan, Sohail Jabbar, Zhiming Wu, and Shehzad Khalid. "Plagiarism detection in students' programming assignments based on semantics: multimedia e-learning based smart assessment methodology." *Multimedia Tools and Applications*, **Springer** (2018): 1-18 (CCF C, IF: 3.6, SCI, Q1) (URL : <https://link.springer.com/article/10.1007/s11042-018-5827-6>)
34. **Farhan Ullah**, Junfeng Wang, Muhammad Farhan, Masood Habib, and Shehzad Khalid. "Software plagiarism detection in multiprogramming languages using machine learning approach." *Concurrency and Computation: Practice and Experience*, **Wiley** (2018): e5000. (CCF C, IF: 1.167, SCI, Q3) (URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/cpe.5000>)
35. **Farhan Ullah**, Muhammad Asif Habib, Muhammad Farhan, Shehzad Khalid, Mehr Yahya Durrani, and Sohail Jabbar. "Semantic interoperability for big-data in heterogeneous IoT infrastructure for healthcare." *Sustainable cities and society*, **Elsevier** 34 (2017): 90-96 (IF: 11.7, SCI, Q1) (URL: <https://www.sciencedirect.com/science/article/abs/pii/S221067071730255X>)
36. **Farhan Ullah**, Junfeng Wang, Muhammad Farhan, Sohail Jabbar, Muhammad Kashif Naseer, and Muhammad Asif. "LSA Based Smart Assessment Methodology for SDN Infrastructure in IoT Environment." *International Journal of Parallel Programming*, **Springer**, (2018): 1-16. (SCI, IF: 1.258, Q3) (URL: <https://link.springer.com/article/10.1007/s10766-018-0570-1>)
37. **Farhan Ullah**, Hamad N, Muhammad R N, Fadi A, Shehzad K, Sohail J. Detection of Clone Scammers in Android Markets using IoT-based Edge Computing, *Transactions on Emerging Telecommunications Technologies*, **Wiley**. (SCI, IF: 3.31, Q2) (URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/ett.3791>)
38. **Farhan Ullah**, Abdullah B, Hamza A, Muhammad F, Hamad N, Sabahat H. B, Kaleem R M. An E-Assessment Methodology Based on Artificial Intelligence Techniques to Determine Students' Language Quality and Assignments' Plagiarism, *Intelligent Automation & Soft Computing*, Taylor & Francis, 2019. (SCI, IF: 0.790, Q3) (URL: <http://autosoftjournal.net/paperShow.php?paper=100000138&q=1>)
39. Jamal, Nasir, Chen Xianqiao, Fadi Al-Turjman, and **Farhan Ullah**. "A Deep Learning-based Approach for Emotions Classification in Big Corpus of Imbalanced Tweets." *ACM Transactions on Asian and Low-Resource Language Information Processing* 20, no. 3 (2021): 1-16. (SCI, IF: 2.0, Q2) (URL: <https://dl.acm.org/journal/tallip>)
40. Khan, Mansoor, Chuan He, Tianqi Liu, and **Farhan Ullah**. "A New Hybrid Approach of Clustering Based Probabilistic Decision Tree to Forecast Wind Power on Large Scales." *Journal of Electrical Engineering & Technology* 16, no. 2 (2021): 697-710. (SCI, IF: 1.069, Q2) (URL: <https://link.springer.com/article/10.1007/s42835-020-00616-1>)
41. Li, Jing, Jiang Wang, and **Farhan Ullah**. "An End-to-End Task-Simplified and Anchor-Guided Deep Learning Framework for Image-Based Head Pose Estimation." **IEEE Access** 8 (2020): 42458-42468. (SCI, IF: 4.098, Q1) (URL: <https://ieeexplore.ieee.org/document/9019692>)
42. Wang Jiang, **Farhan Ullah**, Ying Cai, and Jing Li. "Non-Stationary Representation for Continuity Aware Head Pose Estimation Via Deep Neural Decision Trees." **IEEE Access**, Vol 7(2019:181947-181958) (SCI, IF: 4.098, Q1) (URL: <https://ieeexplore.ieee.org/document/8932455>)
43. Hamad N, **Farhan Ullah**, Sohail J, Danish V, Muhammad R N. Malware Detection in Industrial Internet of Things based on Image Visualization and Deep Learning, *Ad Hoc Network*, **Elsevier**. (SCI, IF: 3.490, Q1) (URL: <https://www.sciencedirect.com/science/article/abs/pii/S1570870519306948>)
44. Naeem, Muhammad Rashid, Tao Lin, Hamad Naeem, **Farhan Ullah**, and Saqib Saeed. "Scalable mutation testing using predictive analysis of deep learning model." **IEEE Access**, Vol 7(2019: 158264 - 158283) (SCI, IF: 4.098, Q1) (URL: <https://ieeexplore.ieee.org/document/8886413>)

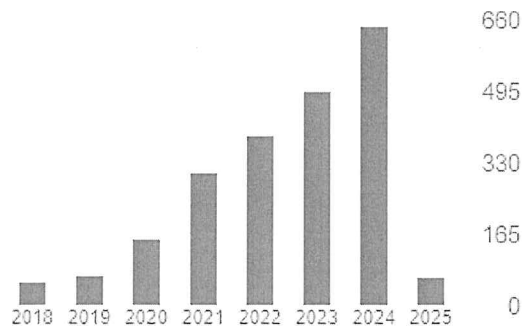
45. Hamad N, Bing G, Danish V, Rashid M. N, **Farhan Ullah**, Hamza A et al. Identification of malicious code variants based on image visualization, *Journal of Computers and Electrical Engineering*, **Elsevier**, 2019, pp. 225-237. (IF: 2.189, SCI) (URL: <https://www.sciencedirect.com/science/article/pii/S004579061733776X>)
46. Hamad N, Bing G, **Farhan Ullah**, Rashid M. N. A Cross-Platform Malware Variant Classification based on Image Representation, *KSII Transactions on Internet and Information Systems*, **Korean Internet Society**, 2019, pp.3756-3777. (SCI, IF: 0.711, Q3) (URL: <http://itiis.org/digital-library/manuscript/2446>)
47. Khan, Mansoor, Tianqi Liu, and **Farhan Ullah**. "A New Hybrid Approach to Forecast Wind Power for Large Scale Wind Turbine Data Using Deep Learning with TensorFlow Framework and Principal Component Analysis." *Energies* 12, no. 12 (2019): 2229. (SCI, IF: 3.2 Q1) (URL: <https://www.mdpi.com/1996-1073/12/12/2229>)
48. Rahman, Ziaur, Muhammad Aamir, Yi-Fei Pu, **Farhan Ullah**, and Qiang Dai. "A Smart System for Low-Light Image Enhancement with Color Constancy and Detail Manipulation in Complex Light Environments." *Symmetry* 10, no. 12 (2018): 718. (SCI, IF: 2.7Q2) (URL: <https://www.mdpi.com/2073-8994/10/12/718>)
49. Jabbar, Sohail, **Farhan Ullah**, Shehzad Khalid, Murad Khan, and Kijun Han. "Semantic interoperability in heterogeneous IoT infrastructure for healthcare." *Wireless Communications and Mobile Computing* 2017 (2017). (SCI, IF: 1.396, Q2) (URL: <https://www.hindawi.com/journals/wcmc/2017/9731806/>)
50. Razzaq Malik, Kaleem, Masood Habib, Shehzad Khalid, **Farhan Ullah**, Muhammad Umar, Taimur Sajjad, and Awais Ahmad. "Data compatibility to enhance sustainable capabilities for autonomous analytics in IoT." *Sustainability* 9, no. 6 (2017): 877. (SCI, IF: 2.592, Q1) (URL: <https://www.mdpi.com/2071-1050/9/6/877>)
51. Razzaq Malik, Kaleem, Tauqir Ahmad, Muhammad Farhan, **Farhan Ullah**, Kashif Amjad, and Shehzad Khalid. "Multiagent semantical annotation enhancement model for iot-based energy-aware data." *International Journal of Distributed Sensor Networks* 12, no. 6 (2016): 9103265. (Q2, IF: 1.614, SCI) (URL: <https://journals.sagepub.com/doi/full/10.1155/2016/9103265>)

EI/Scopus/Conference Publications

1. **Farhan Ullah**, Gautam Srivastava, Leonardo Mostarda, and Diletta Cacciagrano. "Collaborative Intrusion Detection System for Intermittent 10 Vs Using Federated Learning and Deep Swarm Particle Optimization." In *2024 IEEE 11th International Conference on Data Science and Advanced Analytics (DSAA)*, pp. 1-8. IEEE, 2024. (URL: doi: [10.1109/DSAA61799.2024.10722781](https://doi.org/10.1109/DSAA61799.2024.10722781))
2. **Farhan Ullah**, Leonardo Mostarda, Diletta Cacciagrano, Hamad Naeem, Shamsheer Ullah, Pradeep Chaudhary, and Yue Zhao. "P2FL: Privacy-Preserving Federated Learning Approach for Healthcare Informatics at the Edge." In *International Conference on P2P, Parallel, Grid, Cloud and Internet Computing*, pp. 47-58. Cham: Springer Nature Switzerland, 2024. (URL: doi: [10.1007/978-3-031-76462-2_5](https://doi.org/10.1007/978-3-031-76462-2_5))
3. Muhammad A, Yi-Fei P, Ziaur R, Waheed A. A, Hamad N, **Farhan Ullah**, Aymen M. B.A hybrid proposed framework for object detection and classification," *Journal of Information Processing Systems*, 14, 5, 2018, 1176-1194. (DOI: [10.3745/JIPS.02.0095](https://doi.org/10.3745/JIPS.02.0095)) [EI]

Google Scholar Citations: <https://scholar.google.com/citations?user=Cp9jHJYAAAAJ&hl=en>

	All	Since 2020
Citations	2229	2068
h-index	25	24
i10-index	44	42



Invited / Technical Talks

- **Keynote speaker** in 2nd International Conference on Advanced STEAM Education: Emerging Trends and Applications, 2024 (ICASE - 2024), November 7th, 8th 2024. (<https://steam.tuf.edu.pk/home>)
- **Keynote speaker** in 2nd International Conference on Advanced Sensing, Intelligent Manufacturing ASIM 2023, Dec. 22-24, 2023, Changsha, China (<http://www.icasim.org/conference/keynote-speakers/>)
- Keynote speaker in 2nd International Conference on Internet of Things, Communication and Intelligent Technology (IoT CIT 2023), November 3-5, 2023, Xuzhou, Jiangsu, China (<http://www.iotcit.org/keynote-speakers-2023/>)
- Delivered technical talk in 2023 International Conference on Cyber-physical Social Intelligence (ICCSI) October 20-23, 2023, Xi'an, China (https://agist.org/iccsi2023/Organizing_committee.html)
- Participated as a Host in the 8th International Lecture Series, School of Software, Northwestern Polytechnical University, 19th October, 2023.
- Keynote Talk in Participating in the 8th International Lecture Series, School of Software, Northwestern Polytechnical University, 19th October, 2023.
- Participated and Taught **Joint Human Machine Learning** course in the **Global school organized by International School Office (ISO)**, Northwestern Polytechnical University, September, 2023.
- Keynote Talk in 9th edition of the Science Summit around the 78th United Nations General Assembly (UNGA78) organized by **Quaid-I-Azam University, Islamabad, Pakistan**, September 12-29 2023.
- Delivered technical talk in International Conference on Mobile Internet, Cloud Computing and Information Security (MICCIS 2023), Nanjing, April 7-9, 2023. (<http://www.miccis.org/committee/>)
- Delivered a talk to present the School of Software in Exchange and Research Internship Program between Northwestern Polytechnical University and Engineering School of Digital Technology, Efrei Paris, France. (<https://eng.efrei.fr/>)
- Presented School of Software, for overseas admission promotion organized by **International School Office (ISO)**, Northwestern Polytechnical University, 22nd February, 2023.
- Taught **Joint Human Machine Learning** course in the **Global summer school organized by International School Office (ISO)**, Northwestern Polytechnical University, August, 2022
- Keynote Talk in Participating in the 7th International Lecture Series, School of Software, Northwestern Polytechnical University, 14th October, 2022.
- Presented School of Software, for overseas admission promotion organized by **International School Office (ISO)**, Northwestern Polytechnical University, 10th February, 2022.

- Keynote Talk in Participating in the **6th International Lecture Series, School of Software, Northwestern Polytechnical University**, 14th October, 2021.
- Talk in Participating in the **5th International Lecture Series, School of Software, Northwestern Polytechnical University**, 13th October, 2020.

International Professional Training

- Completed training “**Oxford EMI Certificate for University Lecturers**”, 3rd July to 7th July, 2023.
- Completed the 5 days professional training organized by National University Singapore (NUS) “**Teacher Training Programme: Becoming Effective University Teachers in the Education 4.0 Era**” on 21th January, 2021.

External Doctoral Thesis Examiner

- Doctoral thesis examiner at Department of Software Engineering, University of Engineering and Technology (UET) Taxila, Punjab, Pakistan (2024). **Scholar:** Mr. Asif Memood, **Title:** “Artificial Neuron Model for Large Scale Spiking Brain Neural Network”
- Doctoral thesis examiner at Department of Software Engineering, University of Engineering and Technology (UET) Taxila, Punjab, Pakistan (2024). **Scholar:** Afshan Ahmed, **Title:** “Efficient Emergency Message Dissemination in the Internet Vehicles”
- Doctoral thesis examiner at Department of Software Engineering, University of Engineering and Technology (UET) Taxila, Punjab, Pakistan (2024). **Scholar:** FAROOQ ALI, **Title:** “Multi-Class Pest Detection and Classification using Machine Learning”
- Doctoral thesis examiner at Department of Computer Science, University of Engineering and Technology (UET), Lahore, Punjab, Pakistan (2023). **Scholar:** Nisar Ahmed, **Title:** “Perceptual **Image Quality Assessment Using Biological Inspired Machine Learning Methods**”
- Doctoral thesis examiner at Department of Computer Science, University of Engineering and Technology (UET), Lahore, Punjab, Pakistan (2020). **Scholar:** Ammar Rafiq, **Title:** “QoS Based Algorithm for Efficient Bandwidth Utilization in NF-EPON”

Fellowships/Awards/Grants/Honors

- **Best Paper Award**, The 19th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC-2024), November 13-15, San Benedetto del Tronto, Italy.
- Honored to be selected as **top 2% scientists (2024)** worldwide by Elsevier and Stanford University.
- Honored to be selected as **top 2% scientists (2023)** worldwide by Elsevier and Stanford University.
- **Outstanding Foreign Teaching Faculty award 2021**, School of Software, Northwestern Polytechnical University, Xian, China.
- **Landmark Achievement/ Research Award 2021**, School of Software, Northwestern Polytechnical University, Xian, China.
- **PI: Research Startup Funding** for Research and Development (R&D) program, School of Software, Northwestern Polytechnical University, Xian, China (Grant No. G2020KY05107, G2022WD01004) Grant amount: 300,000 RMB.
- **Co-PI:** of Science and Technology Project of Taicang (2020), Jiangsu, PR. China (Grant No. TC2020JC07), Grant amount: 50,000 RMB.
- **Research Productivity Award (RPA) 2016**, from COMSATS University Islamabad, Pakistan
- **Chinese Government Scholarship for Ph.D. Degree at Sichuan University**
 - Fellowship to support doctorate study at Sichuan University, China [September 2017-June 2020]

Roles in Journals and International Conferences

- **Publicity Chair**, The 20th International Conference on Future Networks and Communications August 4-6, 2025, Leuven, Belgium, (<https://cs-conferences.acadiau.ca/fnc-25/#organizingCommittees>)
- **Guest Editor**, IEEE Journal of Biomedical & Health Informatics (JBHI), <https://www.embs.org/jbhi/special-issues/>
- **Editor**, Journal on Semantic Web and Information Systems (IJSWIS)" IGI Global. SCIE. (<https://www.igi-global.com/journal/international-journal-semantic-web-information/1092>)
- **Publicity Chair**, The 19th International Conference on Future Networks and Communications, August 5-7, 2024, Marshall University, Huntington, WV, USA. (<https://cs-conferences.acadiau.ca/fnc-24/#organizingCommittees>)

- **Lead Guest Editor**, Data Science a <https://cs-conferences.acadiau.ca/fnc-24/#organizingCommittees> and Management, Elsevier. (<https://www.keaipublishing.com/en/journals/data-science-and-management/>)
- **Lead Guest Editor**, Electronics Journal, SCIE. (https://www.mdpi.com/journal/electronics/special_issues/3O495Z3JCG)
- **Special Session (SS) / Workshop**, The 2023 International Conference on Cyber-Physical Social Intelligence (ICCSI 2023), October 20-23, 2023, Xian, China. (<https://agist.org/iccsi2023/acceptedSS.html>)
- **Program Chair**, International Conference on Mobile Internet, Cloud Computing and Information Security (MICCIS 2023), Nanjing, April 7-9, 2023. (<http://www.miccis.org/committee/>)
- **Publicity Chair**, The 18th International Conference on Future Networks and Communications August 14-16, 2023, Halifax, Nova Scotia, Canada, (<http://cs-conferences.acadiau.ca/fnc-23/#organizingCommittees>)
- **Publicity Chair**, The 14th International Conference on Ambient Systems, Networks and Technologies March 15 - 17, 2023, Leuven, Belgium, (<http://cs-conferences.acadiau.ca/ant-23/#organizingCommittees>)
- **Academic Editor**, Security and Communication Networks Journal, SCIE, CCF C Category. Joint Publishers of WILEY & Hindawi. (<https://www.hindawi.com/journals/scn/>)
- **Editor**, KSII Transactions on Internet and Information Systems, SCIE (<http://www.itiis.org/about>)
- **Lead Guest Editor**, Security and Communication Networks Journal, SCIE, CCF C Category. Joint Publishers of WILEY & Hindawi. (<https://www.hindawi.com/journals/scn/>)
- **Lead Guest Editor**, CMC-Computers, Materials & Continua, Tech Science Press, SCIE (<https://www.techscience.com/cmc/>)
- **Guest Editor**, Wireless Communication and Mobile Computing Journal, SCIE, CCF C Category, Hindawi. (<https://www.hindawi.com/journals/wcmc/>)
- **Guest Editor**, Future Internet Journal, ESCI, EI Compendex. (<https://www.mdpi.com/journal/futureinternet>)
- Program Chair Committee Member-ICFNDS 2019
- 3rd International Workshop on Smart Technologies (WOSTECH 2019) - July 01 – 02, 2019, University of Paris Sud, France.
- Reviewer and Technical Program Committee Member-ICFNDS 2019
- 2nd International Workshop on Smart Technologies (WOSTECH 2019) - July 01 – 02, 2018, University of Paris Sud, France
- Reviewer-IEEE IoT Magazine Journal, IEEE
- Reviewer-Sustainability Cities and Society, Elsevier
- Reviewer-Computer Network Journal, Elsevier

Technical/Development Skills

- **Programming Languages:** R, Python (Tensor Flow API), C, PHP, JavaScript, CSS
- **Databases:** MySQL, Oracle, MS Access
- **Tools:** Weka, Rapid Miner, Microsoft Visio, Origin pro, Endnote

Languages

» English (Official Language) » Urdu (National Language) » Chinese (Minor Speaking)