Dr. Muhammad Saleem

Member IEEE | IEEE CIS
Elsevier Certified Reviewer
HEC Approved Ph.D. Supervisor

Personal details

👤 Dr. Muhammad Saleem

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📅 February 20, 1995

⚥ Male

🚩 Pakistani

🌐 msaleem.com

in linkedin.com/in/dr-muhammad-

🌐 scopus.com/authid/detail.uri?
authorId=57645141300

Hobbies

■ Trekking

■ Hiking

■ Photography

■ Computing

■ Research technologies

Profile

Dr. Muhammad Saleem is a dedicated researcher and currently serves as an Assistant Professor in the School of Computer Science at Minhaj University Lahore, Pakistan. He holds a doctoral degree in Computer Science and has specialization in Artificial Intelligence, Machine Learning, Deep Learning, Cloud Computing, and Explainable AI. His research portfolio includes advancements in energy optimization, intelligent traffic control, and predictive healthcare models. Dr. Saleem is committed to developing AI-driven solutions to address digital challenges, contributing significantly to both academic and industry objectives. His work is highly appreciated, indicating that he is experienced and contributes to Computer Science in terms of advancing its frontiers and encouraging teamwork.

Education

Doctor of Philosophy in Computer Science   **Sep 2019 - Sep 2022**
NCBA&E, Lahore, Lahore, Lahore

Master of Philosophy in Computer Science   **Jun 2017 - Aug 2019**
NCBA&E, Lahore, Lahore, Lahore

Master of Computer Science   **Sep 2014 - Aug 2016**
NCBA&E, Lahore, Lahore, Lahore

Bachelor of Science   **Sep 2012 - Aug 2014**
Bahauddin Zakariya University, Multan, Multan, Multan

FSc. (Pre-Engineering)   **Aug 2010 - Sep 2012**
Superior Science Higher Secondary School, Muzaffargarh

Matriculation (Science)   **Sep 2008 - Aug 2010**
Misali Zakariya H/S/S, Pir Jahanian, Muzaffargarh

Employment

Assistant Professor   **Mar 2025 - Present**
Department of Computer Science, Air University (Kharian Campus), Islamabad

Head, School of Software Engineering   **Nov 2024 - Mar 2025**
Minhaj University Lahore, Lahore

Assistant professor   **Jan 2024 -** Mar 2025
School of Computer Science, Minhaj University, Lahore, Pakistan

Head of Department (Computer Science)   **Jul 2022 - Dec 2023**
Department of Computer Science, NCBA&E, Lahore, Pakistan

Assistant Professor of Computer Science   **Oct 2022 - Jan 2024**
Department of Computer Science, NCBA&E, Lahore, Pakistan

Lecturer in Computer Science Department   **Dec 2020 - Sep 2022**
Department of Computer Science, NCBA&E, Lahore, Pakistan

Research Assistant in Computer Science   **Oct 2019 - Dec 2020**
Department of Computer Science, NCBA&E, Lahore, Pakistan

Languages

English ●●●●●

Urdu ●●●●●

References

Dr Muhammad Adnan Khan
Gachon University,, South Korea
+821025256998, adnan@gachon.ac

Dr Muhammad Sohaib
Zhejiang Normal University,, China
+923049199063, sohaibdurrani@
zjnu.edu.cn

Senior Software Engineer   Jan 2016 - Oct 2019
Game Object, Lahore, Pakistan

International Journals Reviewer

- **Computer communications.** (7)
- **Computer networks.** (2)
- **Computers & operations research.** (1)
- **Computers & security.** (5)
- **Decision analytics journal.** (2)
- **IEEE access** (4)
- **IGI Global Book Chapter Peer Reviews** (1)
- **The bottom line.** (1)

International Conferences

- Attended many International IEEE conferences
- Presented many research articles in conferences
- Member IEEE Computational Intelligence Society

Research Supervision

- **M.Sc. or equivalent**
25/ supervisions
- **M.Sc. (Hons.)/M.Phil.**
15 supervisions/ 6 Co-supervision
- **Ph.D**
2 Co-supervisions
- **Committee Member**
M.Phil., Ph.D. Research Coordination

Skills

Great fluency in spoken English and command over comprehension   ●●●●●●●●●●

Ability of researching emerging research areas and maintaining up-to-date subject knowledge   ●●●●●●●●●●

Proficiency in doing research on any given topic and writing a well-crafted research paper   ●●●●●●●●●●

Extra Curricular Activities

- Enthusiastically shared research on health monitoring and smart city solutions, contributing insights to the globe and gaining constructive feedback.
- Participate in international conferences to stay informed on advanced research opportunities.
- Passionate about addressing complex issues in healthcare and smart cities to contribute meaningful solutions to these areas.

Research Publications

Journals
Egyptian Informatics Journal (Impact Factor=5.2, Q1)

1. **Saleem, M.**, Abbas, S., Ghazal, T.M., Khan, M.A., Sahawneh, N. and Ahmad, M., 2022. Smart cities: Fusion-based intelligent traffic congestion control system for vehicular networks using machine learning techniques. **Egyptian Informatics Journal**, 23(3), pp.417-426.

IEEE Access (Impact Factor=3.4, Q1)

2. **Saleem, M.**, Farooq, M.S., Shahzad, T., Hassan, A., Abbas, S., Ali, T., Aggoune, E.H.M. and Khan, M.A., 2024. Secure and Transparent Mobility in Smart Cities: Revolutionizing AVNs to Predict Traffic Congestion using MapReduce, Private Blockchain and XAI. **IEEE Access**.

IEEE Access (Impact Factor=3.4, Q1)

3. Tariq Shahzad, **Muhammad Saleem**, Muhammad Sajid Farooq, Sagheer Abbas, Muhammad Adnan Khan and Khmaies Ouahada, 2024. Developing a Transparent Diagnosis Model for Diabetic Retinopathy Using Explainable AI. **IEEE Access**.

Sensors-MDPI (Impact Factor=3.4, Q1)

4. Abbas, S., Qaisar, A., Farooq, M.S., **Saleem, M.**, Ahmad, M. and Khan, M.A., 2024. Smart Vision Transparency: Efficient Ocular Disease Prediction Model Using Explainable Artificial Intelligence. Sensors, 24(20), p.6618.

Energy Reports (Impact Factor=4.7, Q2)

5. Khan, M.A., Farooq, M.S., **Saleem, M.**, Shahzad, T., Ahmad, M., Abbas, S. and Abu-Mahfouz, A.M., 2025. Smart buildings: Federated learning-driven secure, transparent and smart energy management system using XAI. Energy Reports, 13, pp.2066-2081.

IEEE Access (Impact Factor=3.4, Q1)

6. Farooq, M.S., Muhammad, M.H.G., Ali, O., Zeeshan, Z., **Saleem, M.**, Ahmad, M., Abbas, S., Khan, M.A. and Ghazal, T.M., 2024. Developing a Transparent Anaemia Prediction Model Empowered with Explainable Artificial Intelligence. IEEE Access.

Intelligent Automation & Soft Computing (Impact Factor=3.5, Q3)

7. Batool, T., Abbas, S., Alhwaiti, Y., **Saleem, M.**, Ahmad, M., Asif, M. and Elmitwal, N.S., 2021. Intelligent model of ecosystem for smart cities using artificial neural networks. **Intelligent Automation & Soft Computing**, 30(2).

Advances in Fuzzy Systems (Impact Factor=1.7, Q3)

8. Ibrahim, M., Abbas, S., Fatima, A., Ghazal, T.M., **Saleem, M.**, Alharbi, M., Alotaibi, F.M., Adnan Khan, M., Waqas, M. and Elmitwally, N., 2024. Fuzzy-Based Fusion Model for β-Thalassemia Carriers Prediction Using Machine Learning Technique. **Advances in Fuzzy Systems**, 2024.

Power System Technology (Impact Factor=3.3, Q1)

9. Malik, J.A., Sagheer Abbas, Altaf Hussain, **Muhammad Saleem**, Rahat Qudsi, 2024. Next-Generation Protection: Leveraging Federated Learning and Blockchain for Intrusion Detection in Smart Vehicle Network. Power System Technology, 48(1), pp.931-952.

International Journal of ADVANCED AND APPLIED SCIENCES (Q4)

10. Asghar U, Yousaf S, Fatima A, **Saleem M**, Raza MA, and Ghazal TM (2024). Toward robust image encryption based on chaos theory and DNA computing. **International Journal of Advanced and Applied Sciences**, 11(6): 128-138

11. Naveed SA, Farooq U, Raza MA, Rehman ZU, **Saleem M**, and Ghazal TM (2024). Enhancing traffic flow and congestion management in smart cities utilizing SVM-based linear regression approach. **International Journal of Advanced and Applied Sciences**, 11(10): 166-175

12. Suhail Ashfaq Butt, Umer Farooq, Sagheer Abbas, **Muhammad Saleem**, Muhammad Adnan Khan, Taher M. Ghazal, Empowering Network Security using Explainable AI for Anomaly Detection in Software-Defined Networks, **International Journal of ADVANCED AND APPLIED SCIENCES**

(IJAAS), 2024 (Accepted)
International Journal of Advanced Computer Science & Applications (Impact Factor=3.3, Q3)
13. **Saleem, M.**, Shingari, N., Farooq, M.S., Mago, B. and Khan, M.A., 2024. Real-Time Air Quality Monitoring Model using Fuzzy Inference System. International Journal of Advanced Computer Science & Applications, 15(6).
Journal of Computing & Biomedical Informatics
14. Ahmad, G., **Saleem, M.**, Malik, J.A., Shehzad, M., Sarfraz, Z., Ahmad, R. and Hasham, A., 2024. Analysis of Convolutional Neural Network for Image Classification. **Journal of Computing & Biomedical Informatics**.
15. Mukhtar, R., **Saleem, M.**, Kamran, M., Hussain, M., Ali, S.Y. and Umair, M., 2024. Comparative Analysis of Machine Learning Algorithms for Breast Cancer Detec-tion: A Study of Support Vector Classification, Logistic Regression, and. **Journal of Computing & Biomedical Informatics**.
16. Ahmad, G., **Saleem, M.**, Malik, J.A., 2024. Mobile Application Using CNN For Skin Disease Classification with User Privacy. **Journal of Computing & Biomedical Informatics**.
Sustainability-Springer (Impact Factor=2.4, Q2)
17. Khan, M.A., Sabahat, Z., Farooq, M.S., **Saleem, M.**, Abbas, S., Ahmad, M., Mazhar, T., Shahzad, T. and Saeed, M.M., 2024. Optimizing smart home energy management for sustainability using machine learning techniques. **Discover Sustainability**, 5(1), p.430.
Mathematics-MDPI (Impact Factor=2.2, Q2)
18. Anas Bilal, Abdulkareem Alzahrani, Khalid Almohammadi, **Muhammad Saleem**, Muhammad Sajid Farooq, and Muhammad Ubaid Ullah, 2024. Smart Vision Transparency: Modelling an Intelligent Forecasting System for Cardiovascular Using Explainable Artificial Intelligence. **Mathematics**. Accepted
Other Journals
19. Fatima, S.A., Hussain, N., Balouch, A., Rustam, I., **Saleem, M.** and Asif, M., 2020. IoT enabled smart monitoring of coronavirus empowered with fuzzy inference system. **International journal of advance research, ideas and innovations in technology**, 6(1), pp.188-194.
20. Ullah, M.U., Hassan, A., Asif, M., Farooq, **M.S. and Saleem**, M., 2022. Intelligent Intrusion Detection System for Apache Web Server Empowered with Machine Learning Approaches. **International Journal of Computational and Innovative Sciences**, 1(1), pp.21-27.
21. Malik, R., Raza, H. and **Saleem, M.**, 2022. Towards A Blockchain Enabled Integrated Library Managment System Using Hyperledger Fabric: Using Hyperledger Fabric. **International Journal of Computational and Innovative Sciences**, 1(3), pp.17-24.
22. Akmal, R. and **Saleem, M.**, 2022. AA Novel Method to improve the Round Robin CPU Scheduling Quantum time using Arithmetic Mean". **International Journal of Computational and Innovative Sciences**, 1(2), pp.69-82.
23. Ahmed, F., Asif, M., **Saleem, M.**, Mushtaq, U.F. and Imran, M., 2023. Identification and Prediction of Brain Tumor Using VGG-16 Empowered with Explainable Artificial Intelligence. **International Journal of Computational and Innovative Sciences**, 2(2), pp.24-33.
24. Saeed, M.S. and **Saleem, M.**, 2023. Cross Project Software Defect Prediction Using Machine Learning: A Review. **International Journal of Computational and Innovative Sciences**, 2(3), pp.35-52.
25. Waqas, M., Kamran, **M., Saleem**, M. and Ilyas, A., 2024. Traffic Congestion Monitoring Improvement Through Federated Learning Technique. **International Journal of Computational and Innovative Sciences**, 3(1), pp.13-19.
Conferences Published Articles
26. **Saleem, M.**, Khan, M.A., Abbas, S., Asif, M., Hassan, M. and Malik, J.A., 2019, July. Intelligent FSO link for communication in natural disasters empowered with fuzzy inference system. In 2019

	International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-6). IEEE.
27.	Ghazal, T.M., Rehman, A.U., **Saleem, M.**, Ahmad, M., Ahmad, S. and Mehmood, F., 2022, February. Intelligent Model to Predict Early Liver Disease using Machine Learning Technique. In 2022 International Conference on Business Analytics for Technology and Security (ICBATS) (pp. 1-5). IEEE.
28.	Asif, M., Khan, M.A., Abbas, S. and **Saleem, M.**, 2019, January. Analysis of space & time complexity with PSO based synchronous MC-CDMA system. In 2019 2nd international conference on computing, mathematics and engineering technologies (iCoMET) (pp. 1-5). IEEE.
29.	**Saleem, M.**, Khadim, A., Fatima, M., Khan, M.A., Nair, H.K. and Asif, M., 2022, October. ASSMA-SLM: Autonomous System for Smart Motor-Vehicles integrating Artificial and Soft Learning Mechanisms. In 2022 International Conference on Cyber Resilience (ICCR) (pp. 1-6). IEEE.
30.	Al-Dmour, N.A., Salahat, M., Nair, H.K., Kanwal, N., **Saleem, M.** and Aziz, N., 2022, October. Intelligence Skin Cancer Detection using IoT with a Fuzzy Expert System. In 2022 International Conference on Cyber Resilience (ICCR) (pp. 1-6). IEEE.
31.	Aslam, M.A., Zonain, M., Muneer, S., Sattar, O., Salahat, M. and **Saleem, M.**, 2022, October. Neurological Disorder Detection Using OCT Scan Image of Eye. In 2022 International Conference on Cyber Resilience (ICCR) (pp. 01-13). IEEE.
32.	Abbas, S., Fatima, A., Asif, M. and **Saleem, M.**, 2019. Energy optimization in smarts homes by using fuzzy inference system.
33.	Athar, A., Asif, R.N., **Saleem, M.**, Munir, S., Al Nasar, M.R. and Momani, A.M., 2023, March. Improving Pneumonia Detection in chest X-rays using Transfer Learning Approach (AlexNet) and Adversarial Training. In 2023 International Conference on Business Analytics for Technology and Security (ICBATS) (pp. 1-7). IEEE.
34.	Sajjad, G., Khan, M.B.S., Ghazal, T.M., **Saleem, M.**, Khan, M.F. and Wannous, M., 2023, March. An Early Diagnosis of Brain Tumor Using Fused Transfer Learning. In 2023 International Conference on Business Analytics for Technology and Security (ICBATS) (pp. 1-5). IEEE.
35.	**Saleem, M.**, Khan, M.S., Issa, G.F., Khadim, A., Asif, M., Akram, A.S. and Nair, H.K., 2023, March. Smart Spaces: Occupancy Detection using Adaptive Back-Propagation Neural Network. In 2023 International Conference on Business Analytics for Technology and Security (ICBATS) (pp. 1-6). IEEE.
36.	Abualkishik, A., **Saleem, M.**, Farooq, U., Asif, M., Hassan, M. and Malik, J.A., 2023, March. Genetic Algorithm Based Adaptive FSO Communication Link. In 2023 International Conference on Business Analytics for Technology and Security (ICBATS) (pp. 1-4). IEEE.
37.	Ghazal, T.M., Janjua, J.I., Abbas, S., Fatima, A., **Saleem, M.**, Khan, M.A. and Alqarafi, A., 2024, May. Fuzzy-Based Weighted Federated Machine Learning Approach for Sustainable Energy Management with IoE Integration. In 2024 Systems and Information Engineering Design Symposium (SIEDS) (pp. 112-117). IEEE.
38.	Ali, A., Zia, A., Razzaque, A., Shahid, H., Sheikh, H.T., **Saleem, M.**, Yousaf, F. and Muneer, S., 2024, February. Enhancing Cybersecurity with Artificial Neural Networks: A Study on Threat Detection and Mitigation Strategies. In 2024 2nd International Conference on Cyber Resilience (ICCR) (pp. 1-5). IEEE.
39.	Janjua, J.I., Sabir, A., Abbas, T., Abbas, S.Q. and **Saleem, M.**, 2024, February. Predictive Analytics and Machine Learning for Electricity Consumption Resilience in Wholesale Power Markets. In 2024 2nd International Conference on Cyber Resilience (ICCR) (pp. 1-7). IEEE.
Book Chapter Published	
40.	Malik, J.A. and **Saleem, M.**, 2022. Blockchain and Cyber-Physical System for Security Engineering in the Smart Industry. In Security Engineering for Embedded and Cyber-Physical Systems (pp. 51-70). CRC press.

41.	Javaid Ahmed Malik, Aamir Hussain, Habib shah, **Muhammad Saleem**, Tawfeeq alsanoosy, Usman Mohyud Din Chaudhary, 2024. Optimizing Agricultural Risk Management with Hybrid Block-chain and Fog Computing Architectures for Secure and Efficient Data Handling, Studies in Computational Intelligence, **Springer Nature**.
42.	Qadri, S., Malik, J.A., Shah, H. and Raza, M.A., **Saleem M.,** for Enhanced Security and Data Privacy in Agricultural IoT Systems. Computational Intelligence in Internet of Agricultural Things, p.339.
43.	Malik, J.A., **Saleem, M.,** Almutairi, S. and Chaudhary, U.M.D., Implementing Fog Computing in Precision Agriculture for Real-Time. Computational Intelligence in Internet of Agricultural Things, p.371.
Submitted Articles	
44.	Fahad Ahmed, Waseem Ahmad, Areej Fatima, **Muhammad Saleem**, Sagheer Abbas, Intelligent Skin Disease Prediction System Using Transfer Learning and Explainable Artificial Intelligence, **Advances in Fuzzy Systems,** 2023
45.	**Muhammad Saleem**, Muhammad Sajid Farooq, Muhammad Ubaid Ullah, Muhammad Shoukat Aslam, Muhammad Adnan Khan, "Intelligent Identification of Burst Header Packet Flooding Attack on OBS using Machine Learning Technique" ICNGC, 2024
46.	Nouh Elmitwally, Muhammad Sajid Farooq, **Muhammad Saleem**, Muhammad Ubaid Ullah, Muhammad Adnan Khan, "Fuzzy Inspired Intelligent Interaction Model for Business Sector using Statistical Analysis" ICNGC, 2024
47.	Muhammad Ubaid Ullah, Attia amin, Muhammad Sajid Farooq, **Muhammad Saleem**, Javaid Ahmad malik, Muhammad Adnan Khan, "Machine Learning Driven Traffic Congestion Control Approach in VANETs" ICNGC, 2024
48.	Sagheer Abbas, **Muhammad Saleem**, Muhammad Sajid Farooq, Muhammad Ubaid Ullah, Muhammad Adnan Khan, "Risk Assessment of Maintenance Activities in Business Sector using Fuzzy Statistical Analysis" ICNGC, 2024
49.	Explainable AI-Empowered Interpretable Data-Driven Framework for Fuel Consumption and CO2 Emission
50.	Secure, Interpretable, and Informed Lung Cancer Prediction Model using MapReduce, Private Blockchain, Federated Learning and XAI
51.	Deep Learning-Driven Interpretable, and Informed Decision-Making Model for Brain Tumour Prediction Using Explainable AI
52.	Smart and Transparent Grid Stability Prediction for Efficient Load Forecasting using Explainable AI
53.	Autonomous Vehicles: Empowering Transparency in XAI-Driven AVNs to Enhance Mobility in Smart Cities
54.	Enhancing Al Decision Making with Emotion-Inspired Machine Learning Models: Applications in Robotics and Human-Robot Interaction
55.	Barriers to Implementing an Emotional Intelligence-based Artificial Intelligence (Al)
56.	Towards Transparent and Explainable Emotional Intelligence in Al: Enhancing Sustainable Development with Interpretability