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🌐 <https://asim-lab.github.io/cv/>

🌐 https://scholar.google.com.pk/citations?user=uTJ-_NQAAAAJ&hl=en

🌐 <https://www.webofscience.com/wos/author/record/W-5210-2019>

🌐 <https://www.scopus.com/authid/detail.uri?authorId=57212779889>



Employment History

- 2026 – cont. **Associate Professor**, Faculty of Computing, Riphah International University, Faisalabad, Pakistan.
- 2023 – 2025. **Researcher**, School of Information and Software Engineering, University of Electronic Science and Technology of China, China.
- 2022 – 2026 **Assistant Professor**, Faculty of Computing, Riphah International University, Faisalabad, Pakistan.
- 2021 – 2022 **Visiting Assistant Professor**, Computer Science Department, University of Agriculture, Faisalabad, Pakistan
- Visiting Assistant Professor**, Information Technology Department, Government College University, Faisalabad, Pakistan
- 2015 – 2017 **Research Fellow**, National Textile University, Faisalabad, Pakistan
- Assistant**, Department of Management Sciences, National Textile University, Faisalabad, Pakistan

Education

- 2022 – 2025 **Postdoctorate**, Chulalongkorn University, Bangkok, Thailand
- 2017 – 2021 **Ph.D. Software Engineering**, University of Electronic Science and Technology of China, China
Thesis title: *Clustering Schemes for Data Traffic Congestion Management in IoV*.
- 2015 – 2017 **MS. Information Technology**, Government Collage University, Faisalabad, Pakistan
Thesis title: *Tracking of Software Architecture to Requirement Elicitation and Implementation*.
- 2013 – 2015 **M.Sc. Computer Science**, University of Agriculture Faisalabad, Pakistan.

Awards and Achievements

- 2022 – con. **The Second Century Fund (C2F)**, Chulalongkorn University, Bangkok, Thailand.
- 2017 – 2021 **Chinese Government Scholarship**, University of Electronic Science and Technology of China.
- 2018 – 2019 **Academic Achievement Award**, University of Electronic Science and Technology of China.
- 2011 **Intra University Presentation Competition**, at National Textile University, Faisalabad.

Research Interest

Machine Learning, Deep Learning, Health Informatics, Biomedical, VANET

Research and Development Projects

2022 – con.  **AI for Smart Grid Optimization:** Funded by NSRF [Grant No. Bo4G640068], Thailand Science Research and Innovation Fund (IND_FF_68_331_2100_042) , Ratchadapisek Somphot Fund, and the Second Century Fund (C2F), Chulalongkorn University.

Role: Researcher

 **AI, Machine Learning, and Smart Grid Technology:** Funded by Thailand Science Research and Innovation Fund, Ratchadapisek Somphot Fund, and C2F, Chulalongkorn University.

Role: Researcher

2023 – con.  **Vehicular Networks and Data Traffic Management:** Supported by the National Natural Science Foundation of China [Grant No. 62272089]

Role: Researcher

2024 – con.  **Deep Learning for Seismic Horizon Imaging:** Developing innovative 2D and 3D seismic interpretation models in collaboration with the Malaysia–Thailand Joint Authority (MTJA).

Role: Co-PI.

Research Publications

Journal Articles

- 1 T. Ahmad, T. Alsubait, A. Salhi, A. Ibraheem, and **Saleem, Muhammad Asim**, “Risk-aware adaptive federated learning for cyber-secure edge-ai in smart edge-iot environments,” *Computer Modeling in Engineering & Sciences (CMES)*, vol. 147, no. 2, p. 1, 2026.
- 2 H. Ishfaq et al., “Detection of ransomware attack in iot-based smart meter using hybrid deep learning model,” *IEEE Transactions on Consumer Electronics*, 2026.  DOI: 10.1109/TCE.2026.3659127.
- 3 L. H. Lejebo, K. A. Tesfaye, **Saleem, Muhammad Asim**, K. Prasad, and S. Zhou, “Rsa-sac: A reliability- and sparsity-aware scheduler for real-time holographic counterpart orchestration in consumer fog networks,” *IEEE Transactions on Consumer Electronics*, pp. 1–1, 2026.  DOI: 10.1109/TCE.2026.3665913.
- 4 L. H. Lejebo, K. A. Tesfaye, M. Shabaz, H. Aldawsari, **Saleem, Muhammad Asim**, and S. Zhou, “Dendrite-inspired drl scheduling with interpretable semantic receptive fields in adaptive fog computing,” *IEEE Network*, 2026.
- 5 M. A. Naeem, S. Yang, **Saleem, Muhammad Asim**, A. Javeed, and T. Ahmad, “A hybrid approach for accurate skin lesion segmentation using lednet and swin-umamba,” *Scientific Reports*, vol. 16, no. 1, p. 5415, 2026.  DOI: <https://doi.org/10.1038/s41598-026-38056-y>.
- 6 **Saleem, Muhammad Asim** et al., “Multi-agent reinforcement learning for real-time adaptive lane control in mixed cav-hdv freeways traffic,” *IEEE Transactions on Consumer Electronics*, pp. 1–1, 2026.  DOI: 10.1109/TCE.2026.3683075.
- 7 **Saleem, Muhammad Asim** et al., “Strokefuse-attnnet: A hybrid feature fusion and self-attention model for stroke detection using neuroimages,” *Complex & Intelligent Systems*, 2026.  DOI: <https://doi.org/10.1007/s40747-026-02288-2>.
- 8 A. Javeed, P. Anderberg, A. N. Ghazi, **Saleem, Muhammad Asim**, and J. Sanmartin Berglund, “Predicting depression in older adults: A novel feature selection and neural network framework,” *Neural Processing Letters*, vol. 57, no. 3, pp. 1–21, 2025.  DOI: 10.1007/s11063-025-11760-y.

- 9 A. Javeed et al., "A data-driven approach for early dementia prediction using insights from the swedish national study on aging and care," *Intelligence-Based Medicine*, vol. 12, p. 100 298, 2025.  DOI: 10.1016/j.ibmed.2025.100298.
- 10 M. Khalid et al., "Ecgnnet-vit: Hybridizing googlenet with vision transformer for accurate covid-19 detection from ecg images," *Engineering Journal*, vol. 29, no. 10, pp. 97–114, 2025.  DOI: <https://doi.org/10.4186/ej.2025.29.10.97>.
- 11 M. A. Khan et al., "Integrating data mining with transcranial focused ultrasound to refine neuralgia treatment strategies," *Journal of Neuroscience Methods*, vol. 418, p. 110 433, 2025.  DOI: 10.1016/j.jneumeth.2025.110433.
- 12 A. Mubarak et al., "Fpga-driven secure energy routing and attack detection in decentralized microgrids with srem-based dynamic path optimization," *IEEE Transactions on Consumer Electronics*, pp. 1–1, 2025.  DOI: 10.1109/TCE.2025.3600689.
- 13 M. A. Naeem, S. Yang, M. Mittal, J. Narayan, **Saleem, Muhammad Asim**, and M. Shabaz, "Deep feature fusion for melanoma detection using resnet-vgg networks with attention mechanism," *PeerJ Computer Science*, vol. 11, e3248, 2025.  DOI: 10.7717/peerj-cs.3248.
- 14 M. A. Naeem, S. Yang, **Saleem, Muhammad Asim**, I. Javed, and A. Javeed, "Automated skin cancer detection using medfusionnet with attention-based fusion of convnext and vision transformer," *Scientific Reports*, 2025.  DOI: <https://doi.org/10.1038/s41598-025-31816-2>.
- 15 I. Nazir et al., "Blockchain enabled reserved pricing and privacy preserving model for peer-to-peer energy trading in smart grid," *IEEE Transactions on Consumer Electronics*, pp. 1–1, 2025.  DOI: 10.1109/TCE.2025.3596907.
- 16 **Saleem, Muhammad Asim**, W. Benjapolakul, W. Srisiri, S. Chaitusaney, and P. Kaewplung, "A hybrid prediction model integrating artificial intelligence and geospatial analysis for disaster management," *IEEE Access*, 2025.  DOI: 10.1109/ACCESS.2025.3545449.
- 17 **Saleem, Muhammad Asim**, A. Javeed, W. Benjapolakul, W. Srisiri, S. Chaitusaney, and P. Kaewplung, "Neural-xgboost: A hybrid approach for disaster prediction and management using machine learning," *IEEE Access*, vol. 13, pp. 86 768–86 780, 2025.  DOI: 10.1109/ACCESS.2025.3569499.
- 18 **Saleem, Muhammad Asim** et al., "Delay, energy, and outage considerations in genai-enhanced mec-noma-enabled vehicular networks," *IEEE Transactions on Intelligent Transportation Systems*, pp. 1–15, 2025.  DOI: 10.1109/TITS.2025.3548268.
- 19 **Saleem, Muhammad Asim** et al., "Enhancing stroke risk prediction through class balancing and data augmentation with cbda-resnet50," *Scientific Reports*, vol. 15, no. 1, p. 24 553, 2025.  DOI: 10.1038/s41598-025-07350-6.
- 20 **Saleem, Muhammad Asim** et al., "Vdo-fit: Energy-efficient ofdm scheduling for deadline-constrained transmission in vehicular networks," *IEEE Transactions on Consumer Electronics*, pp. 1–1, 2025.  DOI: 10.1109/TCE.2025.3602895.
- 21 W. Srisiri, N. T. Le, **Saleem, Muhammad Asim**, P. Kaewplung, S. Chaitusaney, and W. Benjapolakul, "Artificial intelligence-based fault classification on photovoltaic plants using a low-cost open-source iot system," *Scientific Reports*, 2025.  DOI: <https://doi.org/10.1038/s41598-025-30678-y>.
- 22 W. Srisiri et al., "A review of practical algorithms for fault diagnosis at dc side of photovoltaic systems and future research trends," *Engineering Journal*, vol. 29, no. 9, pp. 29–58, 2025.  DOI: 10.4186/ej.2025.29.9.29.
- 23 A. Javeed, P. Anderberg, **Saleem, Muhammad Asim**, A. N. Ghazi, and J. Sanmartin Berglund, "Unveiling cancer: A data-driven approach for early identification and prediction using f-rus-rf model," *International Journal of Imaging Systems and Technology*, vol. 34, no. 6, e23221, 2024.  DOI: 10.1002/ima.23221.

- 24 **Saleem, Muhammad Asim** et al., "Innovations in stroke identification: A machine learning-based diagnostic model using neuroimages," *IEEE Access*, vol. 12, pp. 35 754–35 764, 2024.  DOI: 10.1109/ACCESS.2024.3369673.
- 25 S. Ullah et al., "Recent developments in authentication schemes used in machine-type communication devices in machine-to-machine communication: Issues and challenges.," *Computers, Materials & Continua*, vol. 79, no. 1, 2024.  DOI: 10.32604/cmc.2024.048796.
- 26 I. Javed, X. Tang, **Saleem, Muhammad Asim**, A. Javed, M. A. Zia, and I. A. Shoukat, "Localization for v2x communication with noisy distance measurement," *International Journal of Intelligent Networks*, 2023.  DOI: 10.1016/j.ijin.2023.11.007.
- 27 A. Javeed, J. S. Berglund, A. L. Dallora, **Saleem, Muhammad Asim**, and P. Anderberg, "Predictive power of xgboost_bilstm model: A machine-learning approach for accurate sleep apnea detection using electronic health data," *International Journal of Computational Intelligence Systems*, vol. 16, no. 1, p. 188, 2023.  DOI: 10.1007/s44196-023-00362-y.
- 28 A. Javeed, **Saleem, Muhammad Asim**, A. L. Dallora, L. Ali, J. S. Berglund, and P. Anderberg, "Decision support system for predicting mortality in cardiac patients based on machine learning," *Applied Sciences*, vol. 13, no. 8, 2023.  DOI: 10.3390/app13085188.
- 29 **Saleem, Muhammad Asim**, N. Thien Le, W. Asdornwiset, S. Chaitusaney, A. Javeed, and W. Benjapolakul, "Sooty tern optimization algorithm-based deep learning model for diagnosing nsclc tumours," *Sensors*, vol. 23, no. 4, p. 2147, 2023.  DOI: 10.3390/s23042147.
- 30 A. Sharif et al., "Traffic management in internet of vehicles using improved ant colony optimization," *Computers, Materials & Continua*, vol. 75, no. 3, pp. 5379–5393, 2023.
- 31 M. A. Zia, A. Akram, I. Mumtaz, **Saleem, Muhammad Asim**, and M. Asif, "Analysis of grape leaf disease by using deep convolutional neural network," *Agricultural Sciences Journal*, vol. 5, no. 1, pp. 25–36, 2023.  DOI: 10.56520/asj.v5i1.242.
- 32 T. Abbas et al., "Deep neural networks for automatic flower species localization and recognition," *Computational Intelligence and Neuroscience*, vol. 2022, 2022.  DOI: 10.1155/2022/9359353.
- 33 I. Javed, X. Tang, **Saleem, Muhammad Asim**, M. U. Sarwar, M. Tariq, and C. S. Shivachi, "3d localization for mobile node in wireless sensor network," *Wireless Communications and Mobile Computing*, vol. 2022, 2022.  DOI: 10.1155/2022/3271265.
- 34 K. M. Ahmad, G. He, W. Yu, X. Xu, J. Kumar, and **Saleem, Muhammad Asim**, "A survey on semi-parametric machine learning technique for time series forecasting," *arXiv preprint arXiv:2104.00871*, 2021.
- 35 I. Javed et al., "V2x-based mobile localization in 3d wireless sensor network," *Security and Communication Networks*, vol. 2021, pp. 1–13, 2021.  DOI: 10.1155/2021/6677896.
- 36 **Saleem, Muhammad Asim** et al., "Deep learning-based dynamic stable cluster head selection in vanet," *Journal of Advanced Transportation*, vol. 2021, pp. 1–21, 2021.  DOI: 10.1155/2021/6677896.
- 37 A. Sharif et al., "A dynamic clustering technique based on deep reinforcement learning for internet of vehicles," *Journal of Intelligent Manufacturing*, vol. 32, pp. 757–768, 2021.  DOI: 10.1007/s10845-020-01722-7.
- 38 W. Akbar et al., "Development of hepatitis disease detection system by exploiting sparsity in linear support vector machine to improve strength of adaboost ensemble model," *Mobile Information Systems*, vol. 2020, pp. 1–9, 2020.  DOI: 10.1155/2020/8870240.
- 39 A. Amin et al., "Collaborative wireless power transfer in wireless rechargeable sensor networks," *Wireless Communications and Mobile Computing*, vol. 2020, 2020.  DOI: 10.1155/2020/9701531.

- 40 **Saleem, Muhammad Asim**, R. Bhardwaj, and D. Datta, "Application of intelligent computing to develop performance index algorithm as a multicriteria decision making tool," *International Journal of Intelligent Networks*, vol. 1, pp. 85–91, 2020.  DOI: 10.1016/j.ijin.2020.08.001.
- 41 A. Sharif, J. P. Li, **Saleem, Muhammad Asim**, T. Saba, and R. Kumar, "Efficient hybrid clustering scheme for data delivery using internet of things enabled vehicular ad hoc networks in smart city traffic congestion," *Journal of Internet Technology*, vol. 21, no. 1, pp. 149–157, 2020.  DOI: 10.3966/160792642020012101014.
- 42 M. I. Sharif, J. P. Li, M. A. Khan, and **Saleem, Muhammad Asim**, "Active deep neural network features selection for segmentation and recognition of brain tumors using mri images," *Pattern Recognition Letters*, vol. 129, pp. 181–189, 2020.  DOI: 10.1016/j.patrec.2019.11.019.
- 43 **Saleem, Muhammad Asim**, Z. Shijie, and A. Sharif, "Data transmission using iot in vehicular ad-hoc networks in smart city congestion," *Mobile Networks and Applications*, vol. 24, pp. 248–258, 2019.  DOI: 10.1007/s11036-018-1205-x.
- 44 **Saleem, Muhammad Asim** et al., "Expansion of cluster head stability using fuzzy in cognitive radio cr-vanet," *IEEE Access*, vol. 7, pp. 173 185–173 195, 2019.  DOI: 10.1109/ACCESS.2019.2956478.
- 45 A. Sharif, J. P. Li, and **Saleem, Muhammad Asim**, "Internet of things enabled vehicular and ad hoc networks for smart city traffic monitoring and controlling: A review," *International Journal of Advanced Networking and Applications*, vol. 10, no. 3, pp. 3833–3842, 2018.

Editorial

- 1 S. Prajapat, M. Shabaz, **Saleem, Muhammad Asim**, and S. A. Ajrawi, *Special issue on "agentic ai for explainable big data exploration and visual analytics"*.  DOI: 10.1177/2167647X2614722.

Conference Proceedings

- 1 W. Akbar, W.-P. Wu, M. Faheem, S. Saleem, A. Javed, and **Saleem, Muhammad Asim**, "Predictive analytics model based on multiclass classification for asthma severity by using random forest algorithm," in *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)*, IEEE, 2020, pp. 1–4.  DOI: 10.1109/ICECCE49384.2020.9179467.
- 2 M. A. Naeem et al., "Vehicle to everything (v2x) communication protocol by using vehicular ad-hoc network," in *2020 17th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP)*, IEEE, 2020, pp. 384–388.  DOI: 10.1109/ICCWAMTIP51612.2020.9317386.
- 3 Q. Ul Ain, M. A. Zia, N. Asghar, and **Saleem, Muhammad Asim**, "Analysis of variant data mining methods for depiction of fraud," in *Proceedings of the Fourteenth International Conference on Management Science and Engineering Management: Volume 1*, Springer, 2020, pp. 423–432.  DOI: 10.1007/978-3-030-49829-0_31.
- 4 W. AKBAR, W.-P. WU, M. FAHEEM, **SALEEM, MUHAMMAD ASIM**, N. A. GOLILARZ, and A. U. HAQ, "Machine learning classifiers for asthma disease prediction: A practical illustration," in *2019 16th International Computer Conference on Wavelet Active Media Technology and Information Processing*, IEEE, 2019, pp. 143–148.  DOI: 10.1109/ICCWAMTIP47768.2019.9067616.
- 5 U. Rafi, M. A. Zia, A. Razzaq, S. Ali, and **Saleem, Muhammad Asim**, "Multi-queue priority based algorithm for cpu process scheduling," in *Proceedings of the Eleventh International Conference on Management Science and Engineering Management 11*, Springer, 2018, pp. 47–62.  DOI: 10.1007/978-3-319-59280-0_4.

Books and Chapters

- 1 M. A. Naeem et al., “Egret swarm optimization algorithm-based hybrid deep neural network for diagnosis of skin cancer,” in *Transforming Global Healthcare*, CRC Press, 2026, pp. 53–74.

Skills

Languages	Strong reading, writing, and speaking competencies in English, Punjabi, and Urdu.
Coding	Java, PHP, Python, R, SQL, XML/XSL, $\LaTeX$, ...
Databases	MySQL, PostgreSQL, HSQL, SQLite, LotusNotes.
Misc.	Academic research, teaching, training, consultation, $\LaTeX$ typesetting, and publishing.

Miscellaneous Experience

Certification

- 2016
- Introduction to Malpractice, Awarded by City and Guilds of London Institute.
 - Internal Verifier Training, Awarded by City and Guilds of London Institute.
 - Centre Administrator Training, Awarded by City and Guilds of London Institute.
 - Exam Audit Training, Awarded by City and Guilds of London Institute.
 - Invigilator Training, Awarded by City and Guilds of London Institute.
 - Indigenous On Campus Training for Non- Teaching Staff,. Awarded by National Textile University, Faisalabad.
- 2015
- Indigenous On Campus Training for Non- Teaching Staff,. Awarded by National Textile University, Faisalabad.

References

Professor, Dr. Zhou Shijie

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🌐 <https://en.uestc.edu.cn/info/1074/1887.htm>

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