



Faculty Profile

Full Name: Dr. Salman Mahmood

Position/ Designation: Associate Professor

Faculty/Department: Department of Computer Science

Email Address: salman.mahmood@nhu.edu.pk



Short Introduction

I am driven to contribute to the academic excellence and innovation in Artificial Intelligence, Machine learning, Cyber Security, Data Science, Data Mining, Information Systems, Technology in Teaching and Learning, Education Quality Management System, and E-Commerce. With a background in Computer Engineering and expertise in these areas, my goal is to foster a dynamic learning environment that equips students with the skills to tackle complex challenges in machine learning, cybersecurity and data-driven fields.

Experience

AUGUST 2024 TO TILL DATE

- Assistant Professor, Department of Computer Science, Nazeer Hussain University

AUGUST 2009 TO MAY 2020

Having 11 years teaching experience at Pakistan's well renowned and Top ranked Engineering University, Sir Syed University of Engineering & Technology, Karachi, Pakistan. I have taught following courses at Computer Engineering Department.

- Artificial Intelligence
- Cyber Security
- Machine Learning Algorithms
- Project Management
- Data Analytics
- Natural Language Processing



Educational Information

2018-2024

- Ph.D. in Informatics, 2024, Malaysia University of Science & Technology, Malaysia.
Thesis Title: "Self-Adapting Security Monitoring in EUCALYPTUS Cloud Environment".

2011-2012

- Master in Businesses Administration (MBA) with majors in Marketing from Newports Institute of Communication and Economics, Karachi, Pakistan.

2005-2007

- Master in IT Service Management, University of Northampton, (United Kingdom)

1999-2002

- Bachelor in Computer Engineering from Sir Syed University of Engineering and Technology, Karachi, Pakistan.

Achievements, Research/Publications

Achievements & Honors:

- History of Non-Artificial Intelligence Based Biological Monitoring of River Water Quality was awarded Best Paper from over 500 accepted papers.
- Lectured various courses in information systems, databases, web application development and e-commerce techniques etc.
- Supervise undergraduate FYP students.
- Authored research papers in reputed international conferences.
- Member of Local Arrangement Committee as a Protocol Officer in 14th IEEE International Multi-topic Conference (INMIC 2011) in association with IEEE Karachi Section and Higher Education Commission, Pakistan on 22-24 December 2011 at SSUET, Karachi.
- Represents the Computer Engineering Department, SSUET to the delegation of Pakistan Engineering Council.

Research Grants & Funding:

- Travel Grant Sanctioned by Higher Education Commission No.166.30/1/HEC/R&D/2012/1223 of Rs. 236,736/- in UKACC (United Kingdom Automatic Control Council) International Conference on Control (CONTROL 2012), for Oral Presentation of the Research Papers.
- Travel Grant Sanctioned by Higher Education Commission No.146.50/1/HEC/R&D/2011/430 of Rs. 89,450/- in International Conference on Information Management, Innovation Management and Industrial Engineering (ICIII), 2011 for Oral Presentation of the Research Papers.

Society Memberships:

- Member, Pakistan Engineering Council (PEC#COMP/2212)
- Member, Institute of Logistics & Transport, UK (MILT#M-0793)
- Member, Institute of Electrical and Electronics Engineers (IEEE#100246706)



Patents:

1. Hasan, R., Ali, Z., Khizer, Y., & Mahmood, S. (In Progress). A Novel Implementation of High-Speed MISTY1 Block Cipher for cyber security Algorithm.
2. Hussain, S. A., Hussain, S. J., Hasan, R., Mahmood, S., & Jilani, S. A. (2021). A Novel Brain Adequacy Test System to improve Cognitive Index of Youth using Noninvasive Brain Sensors and Artificial Neural Networks. Australian Innovation Patent
3. Hasan, R., Palaniappan, S., Mahmood, S., & Hussain, S. (2021). A novel method and system to enhance teaching learning and student evaluation process using 'eDify' mobile application. Australian Innovation Patent.

Book:

Hasan, R., & Mahmood, S. (2012). Virtual Sight: Wearable Networked Computer. LAP LAMBERT Academic Publishing.

Research Papers:

1. Dattana, V., Kush, A., Hasan, R., & Mahmood, S. (2020). Ad Hoc Network as a solution in Disaster Management. 2020 Global Conference on Wireless and Optical Technologies (GCWOT). doi: 10.1109/gcwot49901.2020.9391631.
2. Hasan, R., Palaniappan, S., Mahmood, S., Naidu, V., Agarwal, A., & Singh, B. et al. (2020). A Review: Emerging Trends of Big Data in Higher Educational Institutions. Micro-Electronics and Telecommunication Engineering, 289-297. doi: 10.1007/978-981-15-2329-8_29.
3. Mahmood, S., Palaniappan, S., Hasan, R., Sarker, K., Abass, A., & Rajegowda, P. (2019). Raspberry PI and role of IoT in Education. 2019 4Th MEC International Conference on Big Data and Smart City (ICBDSC). doi: 10.1109/icbdsc.2019.8645598.
4. Sarker, K., Bin Deraman, A., Hasan, R., Mahmood, S., Abbas, A., & Sohail, M. (2019). Kids' Smart Campus Ontology to Retrieve Interest. 2019 4Th MEC International Conference on Big Data and Smart City (ICBDSC). doi: 10.1109/icbdsc.2019.8645585.
5. Mahmood, S., Hasan, R., Ullah, A., & Sarker, K. (2019). SMART Security Alert System for Monitoring and Controlling Container Transportation. 2019 4Th MEC International Conference on Big Data and Smart City (ICBDSC). doi: 10.1109/icbdsc.2019.8645574.
6. Hasan, R., Asif Hussain, S., Azeemuddin Nizamuddin, S., & Mahmood, S. (2018). An Autonomous Robot for Intelligent Security Systems. 2018 9Th IEEE Control And System Graduate Research Colloquium (ICSGRC). doi: 10.1109/icsgrc.2018.8657642.
7. Hasan, R., Palaniappan, S., Raziff, A., Mahmood, S., & Sarker, K. (2018). Student Academic Performance Prediction by using Decision Tree Algorithm. 2018 4Th International Conference on Computer and Information Sciences (ICCOINS). doi: 10.1109/iccoins.2018.8510600.
8. Hasan, R., Mahmood, S., Hayat, M., & Ali, S. (2015). Role of financial institutions in boosting e-banking in Pakistan. 2015 2Nd World Symposium on Web Applications and Networking (WSWAN). doi: 10.1109/wswan.2015.7210355.
9. Hasan, R., Mahmood, S., Hayat, M., & Ali, S. (2015). Consumption of E-banking services by consumers in Pakistan. 2015 International Conference on Circuits, Power and Computing Technologies [ICCPCT-2015]. doi: 10.1109/iccpct.2015.7159420.
10. Hasan, R., & Mahmood, S. (2012). Survey and evaluation of simulators suitable for teaching for computer architecture and organization Supporting undergraduate students at Sir Syed University of Engineering & Technology. Proceedings of 2012 UKACC International Conference on Control. doi: 10.1109/control.2012.6334776.



11. Mahmood, S., & Hasan, R. (2012). Survey on impact of QMS ISO 9001:2000 in an organization, increases the effectiveness of its operations. Proceedings of 2012 UKACC International Conference on Control. doi: 10.1109/control.2012.6334668.
12. Hasan, R., Mahmood, S., & Raghav, A. (2012). Overview on Computer Forensics tools. Proceedings of 2012 UKACC International Conference on Control. doi: 10.1109/control.2012.6334663.
13. Siddiqui, O., Hasan, R., Mahmood, S., & Khan, A. (2012). Simulators as a Teaching Aid for Computer Architecture and Organization. 2012 4Th International Conference on Intelligent Human-Machine Systems and Cybernetics. doi: 10.1109/ihmsc.2012.33.
14. Hasan, R., Raghav, A., Mahmood, S., & Hasan, M. (2011). Artificial Intelligence in River Quality Assessment. 2011 International Conference on Information Management, Innovation Management and Industrial Engineering. doi: 10.1109/iciii.2011.125.
15. Hasan, R., Raghav, A., Mahmood, S., & Hasan, M. (2011). Artificial Intelligence Based Model for Incident Response. 2011 International Conference on Information Management, Innovation Management and Industrial Engineering. doi: 10.1109/iciii.2011.307.
16. Raghav, A., Hasan, R., & Mahmood, S. (2011). History of Non Artificial Intelligence Based Biological Monitoring of River Water Quality. 2011 International Conference on Information Management, Innovation Management and Industrial Engineering. doi: 10.1109/iciii.2011.342.

Research Journals:

1. Mathotaarachchi K.V, Hasan R, Mahmood S, "Advanced Machine Learning Techniques for Predictive Modeling of Property Prices", Information. 2024; 15(6):295, <https://doi.org/10.3390/info15060295> (IF 3.1, HEC W Category)
2. Mahmood S, Hasan R, Yahaya NA, Hussain S, Hussain M., "Evaluation of the Omni-Secure Firewall System in a Private Cloud Environment.", Knowledge. 2024; 4(2):141-170. <https://doi.org/10.3390/knowledge4020008>. (Invited Paper)
3. Kamal Uddin Sarker, Raza Hasan, Aziz Bin Deraman, and Salman Mahmood, "A Distributed Software Project Management Framework," Journal of Advances in Information Technology, Vol. 14, No. 4, pp. 685-693, 2023. (IF 1.0, HEC Y Category)
4. Mahmood, Salman, et al. "Self-adapting security monitoring in eucalyptus cloud environment." International Journal of Advanced Computer Science and Applications, vol. 14, no. 3, 2023, <https://doi.org/10.14569/ijacsa.2023.0140310>. (IF 0.9 Y Category)
5. Mahmood, S., and N. A. Yahaya. "Exploring Virtual Machine Scheduling Algorithms: A Meta-Analysis". Sir Syed University Research Journal of Engineering & Technology, vol. 13, no. 1, June 2023, pp. 89-100, doi:10.33317/ssurj.561. (HEC Y Category)
6. Sarker, K.U.; Saqib, M.; Hasan, R.; Mahmood, S.; Hussain, S.; Abbas, A.; Deraman, A. A Ranking Learning Model by K-Means Clustering Technique for Web Scraped Movie Data. Computers 2022, 11, 158. <https://doi.org/10.3390/computers11110158>. (IF 2.8, HEC X Category)
7. Hussain, Shaik Asif, et al. "A hybrid soft bit flipping decoder algorithm for effective signal transmission and reception." TELKOMNIKA (Telecommunication Computing Electronics and Control), vol. 20, no. 3, 2022, p. 510, <https://doi.org/10.12928/telkomnika.v20i3.23300>. (SJR 0.286)
8. Hasan, R.; Palaniappan, S.; Mahmood, S.; Abbas, A.; Sarker, K.U. Dataset of Students' Performance Using Student Information System, Moodle and the Mobile Application "eDify". Data 2021, 6, 110. <https://doi.org/10.3390/data6110110>. (IF 2.6, HEC X Category)
9. Shaik Asif. Hussain, Shaik Javeed. Hussain, Raza Hasan, and Salman Mahmood, "Low-cost Voice Based Braille Script Communication for Teaching Aid," Journal of Communications vol. 16, no. 10, pp. 457-467, October 2021. doi: 10.12720/jcm.16.10.457-467 (SJR 0.246, HEC Y Category)



10. Hasan, R., Khizar, Y., Mahmood, S., & Sheikh, M. (2021). Design Space Exploration for High-Speed Implementation of the MISTY1 Block Cipher. *Mathematical Problems in Engineering*, 2021, 1-14. doi: 10.1155/2021/2599500. (IF 1.305, HEC W Category)
11. Hasan, R., Palaniappan, S., Mahmood, S., Sarker, K., Sattar, M., & Abbas, A. et al. (2021). eDify: Enhancing Teaching and Learning Process by Using Video Streaming Server. *International Journal of Interactive Mobile Technologies (Ijim)*, 15(11), 49. doi: 10.3991/ijim.v15i11.20245. (SJR 0.316, HEC X Category)
12. Hasan, R., Palaniappan, S., Mahmood, S., Sarker, K., & Abbas, A. (2020). Modelling and predicting student's academic performance using classification data mining techniques. *International Journal of Business Information Systems*, 34(3), 403. doi: 10.1504/ijbis.2020.108649. (SJR 0.260, HEC Y Category)
13. Hasan, R., Palaniappan, S., Mahmood, S., Abbas, A., Sarker, K., & Sattar, M. (2020). Predicting Student Performance in Higher Educational Institutions Using Video Learning Analytics and Data Mining Techniques. *Applied Sciences*, 10(11), 3894. doi: 10.3390/app10113894. (IF 2.679, HEC W Category)
14. Hussain, S., Hasan, R., Mahmood, S., & Hussain, S. (2020). Design of Wireless Robotic System for Rescue Operation in Hazardous Environments. *International Journal of Mechanical Engineering and Robotics Research*, 299-304. doi: 10.18178/ijmerr.9.2.299-304. (SJR 0.187, HEC Y Category)
15. Hasan, R., Palaniappan, S., Mahmood, S., Shah, B., Abbas, A., & Sarker, K. (2019). Enhancing the Teaching and Learning Process Using Video Streaming Servers and Forecasting Techniques. *Sustainability*, 11(7), 2049. doi: 10.3390/su11072049. (IF 3.251, HEC W Category)

Peer Reviewed Journals:

1. Al Shidhani, A. S. S., S. Mahmood, and R. Hasan. "Design and Development of Customer Support System Using Automation". *Journal of Student Research*, June 2022, <https://www.jsr.org/index.php/path/article/view/1470>.
2. Hussain, S., Hasan, R., & Mahmood, S. (2018). Classification and Detection of Plant Disease using Feature Extraction Methods. *International Journal of Applied Engineering Research*, 13(6), 4219-4226.

Scholar ID:

- <https://scholar.google.com/citations?user=64e80lcAAAAJ&hl=en>

