

MUHAMMAD UMAR CHAUDHRY (Ph.D.)



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Career Objective

Seeking a challenging opportunity in a leading research and development organization that demands high competence, educational excellence and consistent working skills resulting in a good research profile.

Memberships

- PIE & AI Ambassador at deeplearning.ai
- GEP Member, Abu Dhabi University
- Pakistan Engineering Council

EDUCATION

Ph.D. Computer Engineering

2014 - 2019

Sungkyunkwan University, Suwon, South Korea

Research Interests: Machine Learning, Feature Selection, Heterogeneous Information Networks

B.Sc. Computer Engineering

2004 - 2009

Bahauddin Zakariya University, Multan, Pakistan

85% / A+ (PEC# COMP/7035)

H.S.S.C

2001 - 2003

B.I.S.E Multan, Pakistan

79% / A

S.S.C

1999 - 2001

B.I.S.E Multan, Pakistan

84% / A+

PUBLICATIONS

Journals

- M. Khalil, M.I. Sharif, A. Naeem, **M.U. Chaudhry**, et al. "Deep Learning-Enhanced Brain Tumor Prediction via Entropy-Coded BPSO in CIELAB Color Space". Computer, Materials & Continua, vol. 77, p. 2031-2046, 2023. (IF. 2.0) (Q2)
- H. Malik, T. Anees, M. Faheem, **M.U. Chaudhry**, A. Ali, and M.N. Asghar. "Blockchain and Internet of Things in smart cities and drug supply management: Open issues, opportunities, and future directions". Internet of Things, vol. 23, p. 100860, 2023. (IF. 6.0) (Q1)
- D. Rehman, M.H. Jamil, H.M.S. Badar, M.D.A. Awan, **M.U. Chaudhry**, and N.I. Kajla. "Enhancing Crop Production and Water Conservation through IoT-Based Smart Irrigation Systems". Journal of Computing & Biomedical Informatics, vol. 5, p. 96-104, 2023.
- H. Malik, T. Anees, **M.U. Chaudhry**, et.al. "A Novel Fusion Model of Hand-Crafted Features with Deep Convolutional Neural Networks for Classification of Several Chest Diseases Using X-Ray Images". IEEE Access, vol.11, p. 39243-39268, 2023. (IF. 3.476) (Q1)
- M. Yasir, A. Haidar, **M.U. Chaudhry**, et.al. "Performing in-situ analytics: Mining frequent patterns from big IoT data at network edge with DHARPP". Engineering Applications of Artificial Intelligence, vol. 116, p. 105480, 2022. (IF 7.802) (Q1)
- H. Salahuddin, K. Imdad, **M.U. Chaudhry**, et.al. "Electric Vehicle Transient Speed Control Based on Vector Control FM-PI Speed Controller for Induction Motor". Applied Sciences, vol. 12, no. 17, p.8694, 2022. (IF 2.838) (Q2)
- H. Salahuddin, K. Imdad, **M.U. Chaudhry**, D. Nazarenko, V. Bolshev, and M. Yasir. "Induction Machine-Based EV Vector Control Model Using Mamdani Fuzzy Logic Controller". Applied Sciences, vol. 12, no. 9, p.4647, 2022. (IF 2.838) (Q2)

Certifications

- CCNA (CSCO11547939)
- CCNA Discovery
- Matlab 7

Coursera:

- What is Data Science?
- Open Source Tools for Data Science
- Machine Learning: Regression
- Machine Learning Foundations: A Case Study Approach

Skills

- Python
- Graphlab
- Numpy, Pandas, etc
- LLMs
- Streamlit
- Java
- C#/C++/C
- Microcontrollers (ATMEL 80C52)
- Cisco switches and routers

Languages

- English
- Urdu
- Punjabi
- Korean (Basic)

- F.J. Saleemi, M.N. Asghar, S. Iqbal, **M.U. Chaudhry**, et.al. "A Basic Parts of Speech (POS) Tagset for morphological, syntactic and lexical annotations of Saraiki language". Journal of Applied and Emerging Sciences, vol. 11, no. 1, p.77-84, 2021.
- M.N. Asghar, **M.U. Chaudhry**, A.U. Rehman, A. Yaseen. "Next-Wave of Ecommerce: Mobile Customers Churn Prediction using Machine Learning". LGURJCSIT, vol. 5, no. 2, p.62-72, 2021.
- F. Hassan, **M.U. Chaudhry**, M. Yasir, M.N. Asghar and S.A. Sarkodie. "Monitoring the Impact of COVID-19 Lockdown on the Production of Nitrogen Dioxide (NO₂) Pollutants Using Satellite Imagery: A Case Study of South Asia". Sustainability, vol. 13, no. 13, p.7184, 2021. (IF 2.576) (Q2)
- M. Yasir, A. Ashraf, **M.U. Chaudhry**, et.al. "D-GENE Based Discovery of Frequent Occupational Diseases among Female Home-Based Workers". Electronics, vol. 10, no. 11, p.1230, 2021. (IF 2.412) (Q2)
- M.N. Asghar, **M.U. Chaudhry**, et.al. "A Review of ARM Processor Architecture, History, Progress and Applications". Journal of Applied and Emerging Sciences, vol. 10, no. 2, 2021.
- **M.U. Chaudhry**, M. Yasir, M.N. Asghar, J.-H. Lee. "Monte Carlo Tree Search based recursive algorithm for feature selection in high dimensional datasets". Entropy, vol. 22, no. 10, p. 1093, 2020. (IF2.494) (Q2)
- A. Khan, H. Shahwani, S.A. Shah, A. Sufian, **M.U. Chaudhry** and Z. Rauf. "Software Defined Network Based Algorithm to Mitigate ARP Spoofing in Multi-Lan". Balochistan Journal of Engineering & Applied Sciences (BJEAS), vol. 3, no. 2, 2020.
- M. Yasir, M.A. Habib, M. Ashraf, S. Sarwar, **M.U. Chaudhry**, H. Shahwani, M. Ahmad and C.M.N. Faisal. "D-GENE: Deferring the GENERation of Power Sets for Discovering Frequent Itemsets in Sparse Big Data". IEEE Access, vol. 8, 2020 (IF. 4.098) (Q1)
- M. Yasir, M.A. Habib, M. Ashraf, S. Sarwar, **M.U. Chaudhry**, H. Shahwani, M. Ahmad and C.M.N. Faisal. "TRICE: Mining Frequent Itemsets by Iterative Trimmed Transaction LattICE in Sparce Big Data". IEEE Access, vol. 7, 2019 (IF. 4.098) (Q1)
- H. Shahwani, M. Ashraf and **M.U. Chaudhry**. "Efficient Detouring of Vehicles after Accident". International Journal of Recent Technology and Engineering, vol. 7, no. 5S4, 2019.
- **M.U. Chaudhry** and J.-H. Lee. "Feature Selection for High Dimensional Data using Monte Carlo Tree Search". IEEE Access, vol. 6, 2018 (IF3.557) (Q1)
- **M.U. Chaudhry** and J.-H. Lee. "MOTiFS: Monte Carlo Tree Search based Feature Selection". Entropy, vol. 20, no. 5, p. 385, 2018. (IF 2.305) (Q2)
- M. Usman, M.M. Iqbal, Z. Iqbal, **M.U. Chaudhry**, M. Farhan and M. Ashraf. "E-Assessment and Computer-Aided Prediction Methodology for Student Admission Test Score". EURASIA Journal of Mathematics Science and Technology Education, vol. 13, no. 8. 2017. (IF0.9) (Q2)
- A. Ali, M. Aslam, J.I. Janjua and **M.U. Chaudhry**. "Methodology for Performance Evaluation of Distributed Multi Agent System". The Nucleus, vol. 54, no. 2, p. 75-82, 2017.
- S. Ahmad, M. Yasir, M. Majid, M. Asif, S. Nazir and **M.U. Chaudhry**. "Geographical Information System Based Approach to Monitor Epidemiological Disaster: 2011 Dengue Fever Outbreak in Punjab, Pakistan". (IJACSA) International Journal of Advanced Computer Science and Applications, vol. 7, no. 5, 2016. (Q3)

- K.R. Malik, **M.U. Chaudhry**, M. Iqbal, Y. Saleem and M. Farhan. "Data Security and Privacy in Cloud Computing: Threat Level Indicators". Science International. 2014.

Book Chapter

- A. Tahir, H. Malik, and **M.U. Chaudhry**. "Multi-classification Deep Learning Models for Detecting Multiple Chest Infection Using Cough and Breath Sounds". Deep Learning for Multimedia Processing Applications, 1st edition, CRC Press, 2024.

Conferences

- H. Shahwani, **M. U. Chaudhry**, J. Yousaf and N. T. Khan, "Data Dissemination through Smart Traffic Lights for Accident Prevention," 2nd International Informatics and Software Engineering Conference (IISEC), 2021, pp. 1-4, doi: 10.1109/IISEC54230.2021.9672399.
- S. Mustafa, A. Ali, H. Salahuddin and **M.U. Chaudhry**. "Two Step Feature Selection for Predicting Mortality Risk in COVID-19 Patients". International Conference on Computing, Electronic and Electrical Engineering (ICE Cube), IEEE 2021. doi: 10.1109/ICECube53880.2021.9628327
- **M.U. Chaudhry**, S.-W. Kim and J.-H. Lee. "An Effective Feature Selection method using Monte Carlo Search". RACS '17. Proceedings of the International Conference on Research in Adaptive and Convergent Systems, p. 44-45, ACM, 2017.
- J.I. Janjua, A. Ali and **M.U. Chaudhry**. "OPENTCQ: Towards Change Management in Hybrid Agile Model". ICCCNT '16. Proceedings of the 7th International Conference on Computing Communication and Networking Technologies, ACM, 2016.
- **M.U. Chaudhry**, S. Oh, N. R Kim and J. H. Lee. "Heterogeneous Information Network based TV Program Recommendation". SCIS & ISIS 2015. The 16th International Symposium on Advanced Intelligent Systems, Mokpo, South Korea, 2015.

WORK EXPERIENCE

Assistant Professor

May 2023 – To Date

Bahauddin Zakariya University, Multan, Pakistan

Subjects Taught: Artificial Intelligence, Data Mining, Data Structures & Algorithms

Additional Responsibilities: Departmental-Director Student Affairs, Member Industrial Advisory Board

Assistant Professor

Oct 2021 – Apr 2023

MNS-University of Agriculture, Multan, Pakistan

Subjects Taught: Machine Learning, Artificial Intelligence, OOP

Assistant Professor

Sep 2019 – Oct 2021

National College of Business Administration & Economics, Lahore (Multan Campus), Pakistan

Subjects Taught: Machine Learning, Programming Fundamentals, OOP

Instructor

Nov 2010 – Feb 2014

Virtual University of Pakistan, Lahore, Pakistan

Subjects Taught: Introduction to Computing, Computer Networks, and Introduction to Programming

Supervision

MS Thesis Supervised:

- Real-Time Detection and Classification of Psittaciformes Species using Deep Learning in Aviculture
- Deep Learning Based Early Estrus detection in Cows
- An Intelligent Sensor Network for Sustainable Water Monitoring and Management
- Genome Wide Identification of Abiotic Stress Responsive Gene Family in Wheat Crops using Machine Learning
- Feature Selection for Predicting Mortality Risk in Patients with COVID-19
- Student Engagement Analysis from Facial Expressions Using a Light Weight Deep Neural Network

FYP (BS) Supervised:

No. of FYP Supervised: 06

REFERENCES

References will be furnished upon request.