Tariq Mahmood

Data Scientist & Machine Learning Expert

Tariqmahmood_16@hotmail.com

WORK EXPERIENCE

Sep2022-Present — **Data Science and Machine Learning Lead**
Sparktechus — Lahore, Pakistan
- Working as a Data Scientist
- Managing projects related to machine learning and quantum machine learning
- Providing solutions to industry problems

Oct2023- Present — **Assistant Professor**
Centre for High Energy Physics, University of the Punjab, Lahore — Lahore, Pakistan
- Teaching various courses at undergraduate and graduate levels
- Conducting research in the following areas: Data Science, High Energy Physics, Particle Physics Data Analysis, Astroparticle Data Analysis, Machine Learning, Quantum Computing, Quantum Machine Learning

Oct2015 – Oct2023 — **Lecturer**
Centre for High Energy Physics, University of the Punjab, Lahore — Lahore, Pakistan
- Teaching various courses at undergraduate and graduate levels
- Conducting research in the following areas: Data Science, High Energy Physics, Particle Physics Data Analysis, Astroparticle Data Analysis, Machine Learning, Quantum Computing, Quantum Machine Learning

Jun2011 - May2013 — **Lecturer**
Department of Computer Science, GC University, Lahore — Lahore, Pakistan
- Teaching various courses at undergraduate and graduate levels
- Conducting research at undergraduate and graduate levels

EDUCATION

Feb2015 - Aug2023 — **PhD High Energy Physics** — Lahore, Pakistan
Centre for high Energy Physics, University of the Punjab, Lahore.
Thesis: Neural network based study of charmonium spectrum.

Sep2009 - Jun2012 — **MS Computer Science** — Lahore, Pakistan
Government College University Lahore
Thesis: Modeling and Simulation of Quantum Cognitive Perceptual Associative Memory for Computer Vision using Unified Theory of Mind for Machine Consciousness

Sep2006 - Aug2008 — **MSc Computational Physics** — Lahore, Pakistan
Centre for high Energy Physics, University of the Punjab, Lahore.
Project: Microcontroller Based Digital Locking System.

Publications

Tariq Mahmood, Talab Hussain, Maqsood Ahmad: "Quantum Computer Architecture: A Quantum Circuit-Based Approach Towards Quantum Neural Network", published in PAS, year=2023.

Tariq Mahmood, Jumanah Ahmed Darwish, Talab Hussain, Maqsood Ahmad, Rehan Ahmed Khan Sherwani: "Solving Schrödinger Wave Equation for the Charmonium Spectrum Using Artificial Neural Networks", Published in Advances in High Energy Physics, IF=1.7, year=2024.

Muhammad Atif Khan, **Tariq Mahmood**, Ambreen Sarwar, Maria Faiq Javaid, Munawar Iqbal: "Prediction of Stock Market Movement Using Long Short-Term Memory (LSTM) Artificial Neural Network: A Case Study of KSE 100 Index", Published in Pakistan Journal of Life and Social Sciences, year=2024.

Hafiza Hina Ibraheem, Muhammad Rizwan Tariq, Shinawar Waseem Ali, Zujaja Umer, Zunaira Basharat, Azeem Intisar, **Tariq Mahmood** et al: "Assessing Nutritional Probing and Storage Stability of Functional Aloe Vera (Aloe barbadensis) based Guava Jam: A Machine Learning Approach for Predictive Modeling", Published in International Journal of Food Science: IF=3.0, 2024.

CONTACTS

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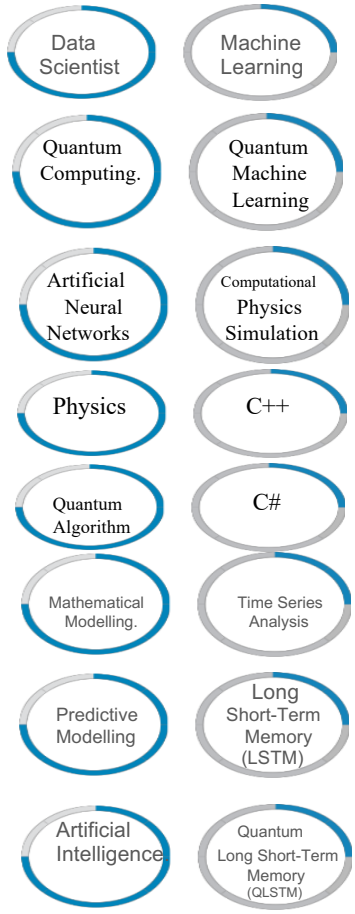
WHY ME?

- Unique combination of expertise in both classical and quantum machine learning
- Advanced skills in Python, TensorFlow, and PyTorch
- Successfully implemented various machine learning models, including:
- Long-Short Term Memory (LSTM) networks for time series analysis and predictive modeling
- Experience with Qiskit and Quantum Circuits, leveraging quantum computing for enhanced computational efficiency
- Specialized in Quantum Long-Short Term Memory (QLSTM) networks and Parametrized Quantum Neural Networks.
- Background in computational physics simulation and mathematical modeling.
- Ability to address complex, multidisciplinary problems with a robust analytical approach
- Proficient in integrating artificial intelligence with quantum computing.
- Positioned to deliver innovative solutions, making me an ideal candidate to drive the success of your project

SKILLS



Python
Artificial Intelligence
Qiskit
Tensorflow
Pytorch

LANGUAGES

English
Urdu