

MOATASIM FAROOQUE

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PROFESSIONAL EXPERIENCE

Machine Learning Engineer | Motive | Mar 2025 - Present

- Developed reliability pod systems, building and improving monitoring and evaluation frameworks for ML models
- Explored various model architectures and classification/detection heads, achieving performance improvements in quick succession
- Implemented 100% visibility policy ensuring company-wide awareness of quarterly performance improvements

Data Science Tutor | Preply | Jan 2024 - Present

- Provided personalized tutoring in Python programming, machine learning algorithms, and data analytics
- Led statistical analysis lessons, improving student understanding by 50%
- Trained students in data visualization best practices, increasing presentation capabilities by 80%

Graduate Teaching Assistant | NCSU Controls Lab | Aug 2022 - Aug 2023

- Demonstrated experimental procedures and underlying engineering concepts to students
- Provided troubleshooting support and evaluated technical writing in lab reports

Research Data Scientist (AI Motion) | Motive | Jul 2021 - Aug 2022

- Developed algorithms to detect close-following events by truckers, improving safety metrics by 60%
- Built end-to-end pipeline for driver distraction model evaluation, reducing processing time from days to hours
- Created performance dashboard providing complete visibility of model metrics in production

Analyst Software Engineer (AI Production) | Afiniti | Dec 2020 - Jul 2021

- Analyzed and tailored data feeds from multiple sources for modeling requirements, enhancing accuracy by 55%
 - Built machine learning pipelines maximizing client profitability by 25%
 - Optimized performance algorithms achieving 33% improvement in successful sales conversions
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EDUCATION

Master of Science in Mechanical Engineering | North Carolina State University | Aug 2018 - May 2020

CGPA: 3.78/4.00

Bachelor of Science in Mechanical Engineering | NUST School of Mechanical and Manufacturing Engineering | Sep 2013 - Jun 2017

CGPA: 3.25/4.00

TECHNICAL SKILLS

Programming Languages & Development Tools: Python, MATLAB, R, SQL, Julia, Mathematica, Linux, Microsoft Office, AWS, GCP

Machine Learning & Data Science: PyTorch, TensorFlow, Computer Vision, NLP, Time Series Analysis, Statistical Analysis, Data Visualization, Multi-objective Optimization

Engineering & Scientific Computing: ANSYS, CFD, FEA, Thermal Systems Design, Image Processing, Data Acquisition and Interpretation

KEY PROJECTS

- **Stock Price Prediction Pipeline:** Developed end-to-end system combining time series analysis of historical data and sentiment analysis of financial Twitter feeds to predict stock closing prices
 - **Activity Recognition System:** Implemented RNN model using IMU sensor data to distinguish between various physical activities with high accuracy
 - **Carbon Measurement Device:** Designed low-cost portable device for measuring aerosol emissions from pellet-based cook-stoves in African households using carbon absorption characteristics
 - **Neurological Disease Modeling:** Created flux-based mathematical models for neuropeptide transport and half-life between neurons to understand deterioration effects in Alzheimer's disease
 - **Computer Vision for Combustion Analysis:** Applied Auto Encoders to resolve high-dimensional images of evolutionary fuel combustion processes
 - **NLP Hate Speech Detection:** Implemented sentiment analysis algorithms to identify contextual hate speech in social media platforms
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HONORS & AWARDS

Fulbright Scholarship | *US Department of State*
\$100,000 scholarship for graduate studies in the United States

Merit Scholarship | *NUST*
Tuition waiver for undergraduate studies based on entrance test performance

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

Machine Learning & AI: Deep Learning and Neural Networks (DeepLearning.AI), Mathematics for Machine Learning (Imperial College London), TensorFlow Developer Professional Certificate, Deep Learning in Computer Vision (HSE), Image Segmentation (NVIDIA), Physics-Informed ML with Modulus (NVIDIA)

Data Science & Analytics: Google Advanced Data Analytics, Analytic Techniques for Business (Duke University), Introduction to SQL (DataCamp)

Programming: Google IT Automation with Python, Data Structures and Algorithms (UC San Diego)