Fahim Rustamy

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SUMMARY

Engineering Ph.D. with a focus on probabilistic modeling and machine learning with 5+ years of professional and academic experience. Expertise in algorithm development, big data, MLOps, and cloud computing.

EXPERIENCE

Verizon – New Business Incubation   August 2021 – Present
Machine Learning Specialist

- Conducted new ML R&D at the IC level and developed object recognition and object tracking ML algorithms using existing 5G signals in the environment.
- Developed ML models for short-term and long-term time series forecasting using XGBoost and LSTM algorithms and collaborated with the team of engineers to Dockerize and deploy it to the AWS cloud with CICD integrations.
- Conducted new R&D at the IC level to develop workforce optimization algorithms for reverse-logistics warehouses using discrete event simulation and Bayesian optimization.
- Assisted in developing a cloud-agnostic end-to-end machine learning platform using open-source Kubeflow and migrating ML workload from AWS Sagemaker.

ATLSS Center, Lehigh University   August 2016 – July 2021
Data Scientist/Probabilistic Modeler/Research Assistant, Bethlehem, PA

- Developed synthetic seismic ground motion records using stochastic processes for the Eastern US. Processed, cleaned and organized over 52 GB of ground motion data with Matlab and Python.
- Proposed a novel method for evaluating the fragility of engineering structures using Artificial Neural Networks that reduces the computational time by 70% from the classical physics-based method.
- Developed a novel method for system reliability analysis of power systems using Monte Carlo simulations and logistic regression methods.
- Proposed a simulation method using damage data and multivariate standard normal samples for system resilience.

State Corps   October 2012 - May 2015
Project Manager, Kabul, Afghanistan

- Managed $30 million worth of infrastructure projects and supervised over 500 employees.

EDUCATION

Lehigh University, Bethlehem, PA   August 2015 - May 2021
Ph.D. & M.Sc. in Engineering/Probabilistic Modeling of Engineering Structures

- Relevant Coursework: Deep-learning, Machine Learning, Random Vibration, Engineering Probability, Data Mining, Engineering Risk, Optimization Theory and Time Series Analysis

Kabul University, Kabul, Afghanistan   March 2009 - Jan 2013
B.Sc. in Engineering

SKILLS

Languages	Python (Pandas, Numpy, Matplotlib, scikit-learn, Flask and Tensorow), SQL and Matlab.
Cloud	Sagemaker, Athena, Redshift, S3, EMR, AWS Lambda, Kubernetes (EKS) and other AWS tools.
ML Models	Linear and Logistic Regression, XGBoost, Neural Network, RNN, CNN, and KNN.
Others	LaTex, Docker, GIT and Linux

CERTIFICATES

• AWS Developer Associate	• AWS Machine Learning Specialty	• AWS Cloud Practitioner
• AWS Data Analytics Specialty	• Tensorflow Developer Certificate	