

# Fahim Rustamy, PhD

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## SUMMARY

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A Fulbright scholar with a Ph.D. and 5+ years of experience in data science, machine learning, deep learning and applied math. Experienced in algorithm development, big data, MLOps, and cloud computing. 3X AWS certified.

## EXPERIENCE

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### Verizon

Senior Data Scientist, NYC, NY

August 2021 – Present

- Conducted new ML R&D at IC level and developed object recognition and object tracking ML algorithms using passive radar with 5G cellular network as source of illumination, resulting in a patent.
- Conducted new R&D at the IC level to develop workforce optimization algorithms for digital-twin project of reverse-logistics warehouses using discrete event simulation and Bayesian optimization that resulted in 32% increase in the number of phones processed per day.
- Pioneered MLOps practices and led a team of two software engineers to build a scalable ML platform using Kubeflow on AWS EKS that improved data scientists' productivity and lowered infrastructure costs by 40%. Migrated ML pipelines from SageMaker to Kubeflow pipelines.
- Developed short-term and long-term time series forecasting models using XGBoost and LSTM and collaborated with a team of software engineers to Dockerize, and deploy them to the AWS cloud with CICD integrations.

### 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

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### 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

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Languages	Python (Pandas, Numpy, Matplotlib, scikit-learn, Flask and Tensorflow), 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 Reinforcement Learning.
Others	LaTeX, Docker, GIT and Linux

## CERTIFICATES

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- AWS Developer Associate
- AWS Machine Learning Specialty
- AWS Cloud Practitioner
- Tensorflow Developer Certificate