SHAMIKH HOSSAIN

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EDUCATION

Duke University Aug 2016 - May 2020
B.S. in Computer Science, B.S. in Statistics, Minor in Economics

Coursework: Bayesian Statistics, Operating Systems (current), Algorithms, Probability, Statistics, Regression Analysis, Data Structures, Linear Algebra, Discrete Mathematics, Database Systems, Energy Data Analytics, Multivariable Calculus

EXPERIENCE

Point72 Asset Management Jun 2019
Incoming Summer Analyst *New York City, NY*

· Incoming software engineering intern on the Market Intelligence - Aperio team (big data unit)

Collins Applied Machine Learning Lab, Duke University Jan 2019 - Present
Undergraduate Researcher *Durham, NC*

· Researching applications of deep learning techniques to improve subsurface landmine detection using satellite/radar imagery.

Department of Computer Science, Duke University Jan 2019 - Present
Undergraduate Teaching Assistant *Durham, NC*

· Serve as TA for Design & Analysis of Algorithms course: hold office hours, lead discussion sections, and grade assignments

MaxPoint Interactive Jun 2018 - Aug 2018
Software Engineer Intern, Platform *Austin, TX*

· Optimized distributed dataset generation program's runtime/memory usage by 70%+ by leveraging Scala/Spark ML to redesign and implement ETL program for real-time bidding system's text-classification pipeline. Ensured backward compatibility/test coverage, analyzed performance metrics from Graphite/Grafana monitoring platforms using Python, pandas and matplotlib.

Energy Data Analytics Lab, Duke University May 2017 - May 2018
Undergraduate Researcher, Data+ Summer Fellow *Durham, NC*

· Developed techniques for predicting high-granularity household electrification rates from satellite imagery using machine learning
· Designed and implemented end-to-end machine learning pipeline to streamline feature extraction, selection, and dimensionality reduction using Python, pandas, scikit-learn, matplotlib and Jupyter notebooks, published open-source ground truth dataset
· Applied gradient boosting classification to predict electrification with .80 AUC using class-imbalanced, high-dimensional data

Office of Information Technology, Duke University Jan 2018 - Present
Developer, Innovation Co-Lab Technical Consultant *Durham, NC*

· Lead design and backend-development of Ruby on Rails web platform helping students find collaborators on projects
· Build and improve Co-Lab infrastructure, website, and developer tools; hold technical advising office-hours and workshops

Carin Lab Group, Duke University Nov 2017 - Present
Undergraduate Researcher *Durham, NC*

· Researching applications of deep learning techniques to Duke Hospital's medical datasets, advised by Dr. Lawrence Carin
· Developed/extended autoencoding NLP program using Python/TensorFlow for summarizing diagnoses from medical notes

PERSONAL PROJECTS

SFPD Dispatch Analysis: Investigation of San Francisco emergency dispatch data to formulate solutions for improving response times. Recognized as top entry to Capital One MindSumo CS challenge. (Python, matplotlib, HTML/CSS/JS)

Kickback: Personal finance recommendation system built with Visa and Capital One APIs that uses transaction data to identify spending habits and provide relevant discounts. Winner of Capital One SWE Summit Hackathon. (Python, Flask)

SKILLS

Software: Python (proficient); Java, Scala, C, Ruby (prior experience); Git
Data: NumPy, SciPy, pandas, matplotlib, Matlab, scikit-learn, R, Jupyter Notebook, Tableau, Excel, SQL
Web: HTML/CSS, JavaScript, Ruby on Rails, Django, Flask, Jenkins
Independent Coursework: *Enthought Training:* SciPy & NumPy, *DeepLearning.ai:* Neural Networks & Deep Learning

OTHER

Activities: Planned and organized Duke Machine Learning Day, Duke's first workshop/research symposium event for ML. Director of Finance of Duke Undergraduate Machine Learning, organized on-campus speaker events and Duke Datathon

Recognition: IB Diploma, National AP Scholar, U.S. Presidential Scholar Candidate, BK McLamore Foundation Scholar, Dean's List, 1st Place: Duke Research Computing Symposium Poster Competition, Health Track Winner: HackDuke 2018
Events: Capital One Software Engineering Summit (May 2018), AQR (Applied Quantitative Research) Capital Management Early Engagement Program (May 2018)