

SHAMIKH HOSSAIN

(469) 386-1378 ♦ shamikh.hossain@duke.edu ♦ shamystic.github.io ♦ github.com/shamystic ♦ linkedin.com/in/shamikh

EDUCATION

Duke University

2016 - 2020

B.S. in Computer Science, B.S. in Statistics, Minor in Economics

Coursework: Probability, Microeconomics, Data Structures, Linear Algebra, International Trade, Discrete Mathematics

EXPERIENCE

Valassis Digital (formerly MaxPoint)

Jun 2018 - Present

Software Engineer Intern, Platform Team

Austin, TX

- Working to optimize distributed text-classification dataset creation by implementing a pipeline using Apache Spark and Scala for real-time bidding system. Ensuring backward compatibility, test coverage, and analyzing performance improvements.

Duke Energy Data Analytics Lab

May 2017 - May 2018

Undergraduate Researcher, Data+ Summer Fellow

Durham, NC

- Developed techniques for predicting village-level household electrification rates from satellite imagery using supervised learning
- Curated ground-truth dataset, designed and implemented end-to-end machine learning pipeline to streamline feature extraction, selection, and dimensionality reduction using Python, pandas, scikit-learn and Jupyter notebooks
- Applied gradient boosting classification to predict electrification with .80 AUC using class-imbalanced, high-dimensional dataset

Duke Office of Information Technology: Innovation Co-Lab

Jan 2018 - Present

Developer, Technical Consultant

Durham, NC

- Develop and improve Ruby on Rails homepage web application and project discovery platform for students: colab.duke.edu
- Build and maintain Co-Lab infrastructure and developer tools, hold technical advising office hours on full-stack development

Carin Lab Group at Duke University

Nov 2017 - Present

Undergraduate Researcher

Durham, NC

- Applying semi-supervised deep learning architectures to Duke Hospital's medical datasets, advised by Dr. Lawrence Carin
- Implemented an autoencoding NLP framework using TensorFlow for parsing diagnosis information from medical notes

Duke Office of Information Technology: Biology

Aug 2016 - May 2017

IT Consultant

Durham, NC

- Worked alongside full-time IT analysts to provide tailored hardware and software support for professors, staff, students
- Wrote documentation, trained new consultants, implemented department-wide software integrations and security updates

SELECT 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 challenge. (Python, matplotlib, HTML/CSS/JS)

Kickback: Personal finance web application built with Visa and Capital One APIs that uses transaction data to identify spending habits and recommend tailored discounts. Winner of Capital One SWE Summit Hackathon. (Flask, HTML/CSS/JS)

HitChecker: Review tool for crowdsourced image annotation - drastically reduced time needed for dataset review/worker payment and ensured integrity of ground-truth data in research project. (Tkinter, Amazon Mechanical Turk API)

Politiquette: Chrome extension displaying on-hover interest group ratings for US senators on inequality issues (Flask, JS)

SKILLS

Software: Python (proficient); Java, Scala, C, Ruby (prior experience); Git

Data: NumPy, SciPy, pandas, matplotlib, Matlab, scikit-learn, R, Jupyter Notebook, Tableau, Excel

Web: HTML/CSS, JavaScript, Ruby on Rails, Django, Flask

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, organizing on-campus speaker events and fall datathon

Interests: Statistical modeling, API development, machine learning, distributed computing, high-dimensional data analysis

Recognition: IB Diploma Recipient, National AP Scholar (2x), U.S. Presidential Scholar Candidate, Burger King Scholar, Dean's List, Microsoft Coding Competition - 3rd Place (tie), Duke Research Computing Symposium Poster Competition - 1st Place, 2018 State Energy Conference of North Carolina - Honorable Mention Research Poster

Events: Attended Capital One Software Engineering Summit (May 2018), AQR (Applied Quantitative Research) Capital Management Early Engagement Program (May 2018)

Work Authorization: U.S. Citizen