

SHAMIKH HOSSAIN

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EDUCATION

Duke University

2016 - 2020

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

Coursework: Probability, Microeconomics, Multivariable Calculus, Linear Algebra, Computational Biology

EXPERIENCE

Valassis Digital (formerly MaxPoint)

Jun 2018 - Present

Software Engineering Intern, Platform Team

Austin, TX

- Working to optimize distributed dataset generation jobs using Scala and Apache Spark, maintaining backward compatibility

Duke Energy Data Analytics Lab

May 2017 - May 2018

Research Associate, Data+ Summer Fellow

Durham, NC

- Developed techniques for predicting village-level household electrification rates from satellite imagery using supervised learning
- Published ground-truth dataset, built and deployed data pipeline to streamline feature extraction and dimensionality reduction
- 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 Duke-related APIs and developer tools, hold technical advising office hours on full-stack development

Carin Lab Group at Duke University

Nov 2017 - Present

Research Assistant

Durham, NC

- Applying semi-supervised deep learning architectures to Duke Hospital's medical datasets, advised by Dr. Lawrence Carin
- Used patient data to automate medical report review with autoencoding and natural language processing in TensorFlow

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. 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)

SKILLS

Software: Python, Java (experienced); C, Ruby (familiar); 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: Organized Duke Machine Learning Day, a workshop/research symposium event, as Director of Logistics

Interests: API development, machine learning, urban economics, high-dimensional data analysis, statistical modeling

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

Work Authorization: U.S. Citizen