SHAMIKH HOSSAIN

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EDUCATION

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

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

EXPERIENCE

Valassis Digital May 2018
Software Engineering Intern *Austin, TX*

Duke Energy Data Analytics Lab May 2017 - Present
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*

· Build Duke-related APIs and developer tools, hold weekly technical advising office hours for students
· Develop and maintain Co-Lab homepage and project discovery platform in Ruby on Rails: colab.duke.edu

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: *Coursera:* Machine Learning, *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 (tie), Duke Research Computing Symposium Poster Competition- 1st
Events: Invited to Capital One Software Engineering Summit (May 2018), AQR (Applied Quantitative Research) Capital Management Early Engagement Program (May 2018), 2018 State Energy Conference of North Carolina (April 2018)