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

Relevant Coursework: Data Structures & Algorithms, Probability, Discrete Mathematics, Computer Architecture, Microeconomics, Multivariable Calculus, Linear Algebra, Energy Data Analytics Lab, Economic Principles

EXPERIENCE

MaxPoint Interactive Summer 2018
Incoming Software Engineering Intern *Austin, TX*

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

- Develop university APIs, websites, and developer tools and hold weekly technical advising office hours for the student community.
- Contributing to development of Co-Lab homepage and project discovery platform in Ruby on Rails: https://colab.duke.edu/

Duke Energy Data Analytics Lab Summer 2017 - Present
Research Associate *Durham, NC*

- Building open-source research tools, datasets, and predictive models relevant to energy access and geospatial data
- Developed techniques for predicting electrification rates from satellite imagery using supervised learning/image processing
- Built and deployed ground-truth data pipeline using Python to streamline feature extraction and dimensionality reduction
- Published dataset and led undergraduate research team to develop automated, end-to-end system for predicting village electrification to enhance grid expansion efforts in developing countries through NSF-funded research and Data+ summer program

Carin Lab Group at Duke University November 2017 - Present
Research Assistant *Durham, NC*

- Applying newly developed deep-learning architectures to new datasets under supervision of Dr. Lawrence Carin.
- Collaborating with graduate researchers in implementing autoencoder frameworks to natural language processing problems with limited labeled data using semi-supervised learning; currently predicting diagnosis from medical notes using Python/TensorFlow

Duke Office of Information Technology: Biology August 2016 - May 2017
IT Consultant *Durham, NC*

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

SELECT PROJECTS

HitChecker: Review tool for crowdsourced image annotation data interfacing with Amazon Mechanical Turk allowing for efficient image task evaluation and Mechnical Turk worker payment. Drastically reduced time needed for dataset review and ensured integrity of ground-truth data. (Python, Tkinter, Amazon Mechanical Turk API)
Biology IT Inventory: Web platform & RESTful API for keeping track of helpdesk inventory equipment and users (Django)
Politiquette: Chrome extension displaying on-hover interest group ratings for US senators on inequality issues (JS/Flask)
Cache Simulator: Write-through, least-recently-used policy cache simulation program for computer architecture course (C)

SKILLS

Software: Python, Java (experienced); C, Ruby (familiar)
Data: NumPy, SciPy, pandas, matplotlib, Excel, Matlab, scikit-learn, TensorFlow, R, Jupyter Notebook
Web: HTML/CSS, JavaScript, Ruby on Rails, Django, Flask, Node, Bootstrap
General: Git, Linux/Windows/Mac OS, Google Cloud Platform, Heroku
Coursework: *Coursera:* Machine Learning, *DeepLearning.ai:* Neural Networks & Deep Learning, *Lynda:* Django, Deploying TensorFlow Applications, *Enthought Training:* SciPy & NumPy, *Duke Health Collaborative Institutional Training Initiative:* Biomedical & Vulnerable Subject Research Certification, *Energy Data Analytics Lab:* Data Science Seminar

OTHER

Activities: Organizing Duke Machine Learning Day, a workshop/research symposium event, as Director of Logistics
Interests: API development, machine learning, urban economics, high-dimensional data analysis, scientific computing
Recognition: IB Diploma Recipient, National AP Scholar, Burger King Scholar, Dean's List, Microsoft Coding Competition- 3rd Place (tie), Duke Research Computing Symposium Poster Competition- 1st Place Poster