# Shamikh Hossain

GitHub : shamikh-mill | Websites: shamikh.tech & blog | LinkedIn : shamikh | Contact : shamikh.hossain@duke.edu | (469) 386-1378

## Objective

Aspiring data scientist and engineer interested in working at the interface of research and computation, tackling problems with many dimensions.

## Education

**Duke University** | Durham, NC | August 2016 - May 2020
- B.S, Computer Science, B.S, Economics

## Experience

**Carin Lab at Duke University** | Durham, NC | Research Assistant
November 2017 - Present
- Researching methods to automate Duke Hospital echocardiogram video reviews using TensorFlow under the supervision of Dr. Lawrence Carin

**Duke Energy Data Analytics Lab** | Durham, NC | Research Fellow
May 2017 - Present
- Researching applications of image processing and deep learning to model electricity access rates in developing countries directly from aerial imagery
- Developed an end-to-end machine learning pipeline using Python, scikit-learn, Matlab, image processing libraries, and ArcGIS to streamline data acquisition through crowdsourcing, data evaluation and conversion
- Worked in a team to build open-source electrification dataset in Summer 2017 in NSF-funded research under Dr. Kyle Bradbury of Energy Initiative

**Duke Office of Information Technology** | Durham, NC | IT Consultant
September 2016 - June 2017
- Worked in a team using ServiceNow CRM platform to provide tailored software and hardware support for research computing in Biology labs
- Wrote documentation, researched technical issues, trained new consultants

## Projects

**Biology IT Inventory** - **Web platform** & REST API built on Django, PostgreSQL to track loaner equipment inventory and users for Biology IT
**Politiquette** - A Chrome browser **extension** that displays on-hover interest group ratings for selected issues for US Senators mentions on a page. (Flask)
**HitChecker** - Python/tkinter **program** using Amazon Mechanical Turk API to allow a user to efficiently evaluate and compensate workers for crowdsourced image annotation data, reduced time needed for dataset review by half
**DAMUN Website** - Created new conference **website** for Model UN school organization, website was awarded grant from UN Foundation of America
**Web Tutorial Series** - maintained **YouTube channel** of tutorials on computer software and graphic design, accumulated 185,000+ video views
**Duke Conservation Technology** – Implementing lightweight-tagging and computer vision to build a cost-efficient drone UAV system to monitor endangered species using the Robot Operating System (ROS) library

## Skills

**Software:** Python, Java (experienced), Ruby, C, MIPS Assembly (familiar)

**Data:** NumPy, SciPy, pandas, Excel, Matlab, scikit-learn, TensorFlow, matplotlib, R, Jupyter

**Web:** HTML/CSS, JavaScript, Rails, Django, Flask, Node.js

**General:** Git, Linux, Google Cloud Platform, AWS, Heroku

## Courses

Data Structures & Algorithms, Microeconomics, Computer Architecture, Linear Algebra for Computer Science, Multivariable Calculus, Energy Data Analytics Lab, Intro to Computer Science
Independent Coursework:
Lynda: Django
Enthought: NumPy
Duke Health Biomedical/Vulnerable Subject Research Certification

## Recognition

University Dean's List, National AP Scholar, International Baccalaureate Diploma Recipient, Burger King Scholar, YouTube Partner, 3rd Place; Microsoft Coding Competition at Duke

## Leadership

Duke Machine Learning (DML) - Executive Board Member
Student Organization Finance Committee (SOFC) - Auditor

## Interests

Full-stack development, data science, machine learning, cybersecurity, economic history, energy access, urban and development economics