Ivan Chowdhury

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EDUCATION

The Cooper Union for the Advancement of Science and Art, New York, NY — Sep 2016 -- May 2020
Bachelor of Engineering in Electrical Engineering, focus in Computer Engineering
Honors: Innovator's Merit Scholarship, National Society of Collegiate Scholars nominee, Dean's List (2016-2017)

PROJECTS

itsMe: Attachable Smart Lock — Sep 2019 -- May 2020
Capstone Project

- Designed an Internet of Things (IoT) compatible smart lock with a fully ***open-source, customizable design***.
- Developed and deployed an Android application for live monitoring and controlling of the lock's status.
- Programmed a Raspberry Pi for Bluetooth Low Energy (BLE) request handling and high-precision Servo rotation.
- Optimized materials design to make device 3D-printable and assemblable at ***under $60***.
- Published ***two video demos***, a ***30-page technical paper***, and design schematics for public use.

NYC Restaurant Mapper — May 2020 -- Aug 2020
Personal Project

- Developed a web application that searches up to 5 different food or restaurant queries simultaneously, then displays the best matches on a map of NYC, with quick access to each restaurant's Yelp profile.
- Accessed the Yelp Fusion and Google Maps APIs for restaurant and map data, and the CORS-Anywhere API to send cross-origin requests with JQuery.

Movie Review Sentiment Analyzer — Apr 2020 -- May 2020
Natural Language Processing

- Trained a recurrent neural network (RNN) to perform sentiment analysis on user-inputted movie reviews, using TensorFlow, Keras, and a dataset of 50,000 highly polar movie reviews.
- Recorded an ***accuracy of 93.54%*** during testing.

MATCH: Friend-Matching Platform — Jan 2019 -- May 2019
Software Engineering

- Developed a full-stack web application that matches users to local friends with common interests, featuring a chat system, PBKDF2 encryption, and cookie support.
- Wrote backend code for storing, retrieving, and modifying data from a MySQL database using JDBC.
- Implemented an image upload feature using the Spark web framework and JDBC.
- Wrote unit and integration tests for the database handling and routing, using JUnit and Mockito.

ACTIVITIES

Google Student Developers Club — Sep 2017 -- May 2020
Toastmasters International — Sep 2017 -- May 2020
The Institute of Electrical and Electronics Engineers (IEEE) — Sep 2016 -- May 2020

SKILLS

Languages: Java, Python, Javascript, CSS3, HTML5, SQL, Bash, C++

Software Tools: Git, Maven, Gradle, MySQL, TensorFlow, Keras, NLTK, Spark, Matplotlib, Jupyter

Other: Linux (Ubuntu 20.04 LTS) | Raspberry Pi, Arduino | Test-driven development, Data Structures, Algorithms, TCP/IP, DNS