

Ivan Chowdhury

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EDUCATION

Cooper Union for the Advancement of Science and Art

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

An Internet of Things (IoT) compatible smart lock controlled remotely with an Android application. Fully *open-source, customizable design* that can be 3D-printed and assembled at *under \$60*. Designed for low-cost, modular assembly, and seamless installation with *no required home renovation*.

Key Responsibilities:

- Developed and deployed an Android application for live monitoring and controlling of the lock's state.
- Programmed a Raspberry Pi for Bluetooth Low Energy (BLE) request handling and high-precision Servo rotation.
- Published two video *demos*, a *30-page technical paper*, a recorded presentation, 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

A web application that matches users with friends that share similar interests in their area. The app features a chat system, user account management, PBKDF2 encryption, and cookie support.

Key Responsibilities:

- Wrote backend code for creating, storing, and retrieving data from a MySQL database using JDBC.
- Implemented an image upload feature using the Spark framework and JDBC.
- Wrote unit and integration tests for the database handling and routing, using JUnit and Mockito.

SKILLS

Java, Python, Javascript, CSS3, HTML5, SQL, Bash, C++ | Git, Maven, Gradle, MySQL, TensorFlow, Keras, NLTK, Spark | Raspberry Pi, Arduino | Windows (XP, 7, 10), Linux (Ubuntu 20.04 LTS) | Test-driven development, Data Structures, Algorithms, TCP/IP, DNS