

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

NutriDiary: Adaptive Nutrition Tracker Nov 2020 -- Present
Personal Project

- Developing a full-stack web application that logs user nutrition and fitness data, and uses it to recommend daily calorie and protein intakes to lose or gain weight at their desired rate. Recommendations are adaptive, gaining accuracy over time.
- Implementing a React frontend, Spring Boot backend, and PostgreSQL database, and deploying on Heroku.
- Utilizing Hibernate ORM and Spring Data JPA for data mapping, and a Tomcat web server for handling HTTP requests.

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

- Invented a smart lock that grips onto doors installation-free, and is controlled remotely by an Android application. The device has a fully open-source design that can be customized, 3D-printed, and assembled at under \$60.
- Programmed a Raspberry Pi for Bluetooth Low Energy (BLE) request handling and high-precision Servo rotation.
- Implemented a MySQL database for storing lock state data and user account information.

NYC Restaurant Mapper May 2020 -- Jul 2020
Personal Project

- Built a website that searches up to 5 different Yelp 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

- Built a recurrent neural network (RNN) that performs sentiment analysis on movie reviews. Users may enter a movie review, and the program will predict its general sentiment.
- Used TensorFlow and Keras to train the neural network on a dataset of 50,000 IMDb movie reviews.
- Recorded a prediction accuracy rate 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 unit and integration tests for the database handling and routing, using JUnit and Mockito.

ACTIVITIES

Google Student Developers Club, Institute of Electrical and Electronics Engineers (IEEE), Toastmasters International

SKILLS

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

Software: Git, Maven, React, Spring Boot, PostgreSQL, MySQL, Hibernate, TensorFlow, Keras, Heroku, Tomcat, JUnit

Hardware: Raspberry Pi, Arduino