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, Dean's List (2016-2017)

SKILLS

Languages: Java, HTML5/CSS3, Python, SQL, JavaScript, C/C++, MATLAB
Software: Git, JUnit, Maven, React, Spring, PostgreSQL, MySQL, Hibernate, Heroku, TensorFlow, Keras, NLTK
Hardware: Raspberry Pi, Arduino

PROJECTS

NutriDiary: Adaptive Nutrition Tracker — Jan 2021 — Present

- Developing a full-stack web application that logs nutritional data, and uses it to compute personalized calorie and protein intake recommendations that adapt to gain accuracy over time, helping users meet their weight loss or muscle gain goals
- Implementing a React frontend, Spring Boot backend, and PostgreSQL database, and deploying on Heroku
- Building RESTful web services to manipulate account data and nutrition logs, using Hibernate and Spring Web Services
- Integrating bcrypt password encryption using Spring Security

itsMe: Attachable Smart Lock — Sep 2019 — May 2020

Group Project (Team of 4)

- Invented a low-cost smart lock that latches onto doors and is controlled remotely by an Android application, allowing tenants, apartment owners, and moving homeowners to reinstall it without renovation costs
- 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
- Published an open-source design that could be customized, 3D-printed, and assembled at under $60, and was evaluated by over 100 undergraduates and faculty

RestMapNYC: Restaurant Plotter — May 2020 — Jul 2020

- 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

- Built a recurrent neural network (RNN) that performs sentiment analysis on movie reviews; users may input a movie review, and the neural network will predict whether it has a positive or negative sentiment
- Applied TensorFlow and Keras to train the RNN on a dataset of 50,000 IMDb movie reviews, achieving a prediction accuracy rate of 93.54%

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

Group Project (Team of 3)

- Developed a full-stack web application that matches users to local friends with common interests, and features a chat system
- 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