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)

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
- Building a dynamic frontend using JavaScript, React, and the Chakra UI library
- Implementing a REST API with Java, Spring Boot and Hibernate, to interface with a PostgreSQL database
- Integrating bcrypt password encryption using Spring Security, and deploying to the cloud with Heroku

itsMe: Attachable Smart Lock — Sep 2019 — May 2020
Group Project (Team of 4)

- Invented a low-cost smart lock that installs seamlessly by latching onto doors, allowing tenants, apartment owners, and moving homeowners to reuse it frequently without renovation costs
- Developed an Android app in Java for remote control and monitoring of the smart lock
- Programmed a Raspberry Pi in Python for Bluetooth Low Energy (BLE) request handling and high-precision Servo rotation
- Published an open-source design that could be customized, 3D-printed, and assembled at under $60, and was evaluated positively by over 100 undergraduates, faculty, and visitors

Movie Review Sentiment Analyzer — Apr 2020 — May 2020

- Built a recurrent neural network (RNN) in Python 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%

RestMapNYC: Restaurant Plotter — May 2020 — Jul 2020

- Created a website with jQuery that searches up to 5 different Yelp queries simultaneously, then displays the best matches on a map of NYC, with quick access to each result'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 Ajax

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
- Implemented a web chat in JavaScript, and interfaced with a MySQL database using JDBC
- Wrote unit and integration tests for the database code, using JUnit and Mockito

ACTIVITIES

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

SKILLS

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