

Ivan Chowdhury

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Skills

Languages: Java, Kotlin, Python, JavaScript/HTML/CSS, TypeScript, SQL

Technologies: Git, Docker, Spring Boot, React, Redux, PostgreSQL, MySQL, Maven, Cucumber

Other: Agile Development, REST APIs, Unit Testing, Continuous Integration & Deployment (CI/CD)

Work Experience

Full Stack Software Engineer (Contract) JPMorgan Chase Sep 2021 — Present

- Developed microservices for digitalizing American depository receipts and regulating contract terms, payments, and contributions, using Java, Kotlin, Javascript, TypeScript, SQL, React, Redux, and Spring Boot
- Overhauled entire end-to-end system for creating and modifying digital contracts—writing new API calls, UI components, and SQL queries—to introduce major features requested by end users
- Remediated static and open-source software vulnerabilities, reducing security issues in new releases by 70%
- Employed unit testing with JUnit and Mockito, API integration testing with Postman, and UI automation testing with Cucumber, increasing code coverage across the app by 30%
- Monitored production systems and resolved issues while prioritizing incident response, using AWS, Kubernetes, Splunk, and Datadog, and managed deployment of new releases using a CI/CD pipeline
- Experimented with quantum natural language processing as a means to understand sentences in contract engagement letters, using a syntax-based classification model built in Python
- Integrated agile methodologies into teamwide workflow, with regular sprints, story point estimations, and retrospectives

Projects

itsMe: Attachable Smart Lock git.io/JRHkt

- Led a team of 4 to invent 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 request handling and high-precision servo rotation
- Published an open-source design that could be customized, 3D-printed, and assembled at 30% of the cost of industry smart locks, and was evaluated positively by over 100 undergraduates, faculty, and visitors

NutriDiary: Adaptive Nutrition Tracker git.io/JB1YV

- Developed 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
- Implemented a REST API with Java and Spring Boot, to interface with a PostgreSQL database

Movie Review Sentiment Analyzer git.io/JRHIt

- 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%

MATCH: Social Networking Platform git.io/JRHIE

- Collaborated with a team of 4 to develop a full-stack web application for a social network that matches users to local friends with common interests
- Implemented a web chat in JavaScript, and interfaced with a MySQL database using Java and JDBC

Education

The Cooper Union for the Advancement of Science and Art, New York, NY Sep 2016 — May 2020

Bachelor of Engineering in Electrical Engineering, specialization in Computer Engineering

RestMapNYC: Restaurant Plotter

git.io/JRHl8

- Created a website with JavaScript and 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

Missing Person Tracking API

git.io/J01Ns

- Released an API for reporting and tracking sightings of missing people, using Spring Boot and PostgreSQL
- Implemented image uploading support, and utilized dependency injection for optimal abstraction of web services