

# Ivan Chowdhury

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[GitHub](#) • [Portfolio](#) • [LinkedIn](#)

## Technical Skills

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**Languages:** Java, Python, SQL, JavaScript, Typescript, Kotlin

**Tools & Frameworks:** Git, Spring Boot, React, JUnit, Maven, AWS (S3, EC2, CloudWatch), PostgreSQL, Datadog

**Techniques:** Agile, Unit Testing, RESTful API Development, Continuous Integration & Deployment (CI/CD)

## Work Experience

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**JPMorgan Chase** | Full Stack Software Engineer

Sep 2021 — Present

- Developed microservices spending **60%** on the back end and **40%** on the front end to digitize American depository receipt (ADR) data and regulate contract terms, fees, and payments for issuer companies and custodian banks, using **Java, Kotlin, Javascript, TypeScript, SQL, React, and Spring Boot**
- Revamped entire end-to-end system for viewing, creating and amending digital contracts by writing new API endpoints, UI components, and SQL queries to introduce major features requested by the ADR Pricing & Strategy team
- Managed large-scale test suite upgrades by implementing hundreds of unit tests with **JUnit, Mockito, and Jest**, and incorporating continuous code quality with Sonarqube, resulting in a **60% increase** in app-wide code coverage
- Remediated static and open-source software vulnerabilities by using internal tooling and leveraging the Synk database to reduce security issues in new releases **by 70%**
- Owned major releases by performing code deployments, database refreshes, and dry runs using Oracle, Spinnaker and a CI/CD pipeline built with Jenkins
- Resolved production issues while prioritizing incident response, using **AWS, Kubernetes, Datadog and Splunk**
- Led research into artificial intelligence, machine learning, and quantum natural language processing for incorporation into future projects, by communicating with other research teams and coordinating with VPs to develop scope plans
- Received peer award for excellent client and customer focus, closing **15 Jira tickets** and performing **3 releases** within 2 weeks of production support to address urgent issues and enable Pricing & Strategy team to progress without delays

## Projects

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### itsMe: Attachable Smart Lock

- Spearheaded 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
- Programmed an Android application and Raspberry Pi server for high-precision lock control, using Java and Python
- Published an open-source design that could be customized, 3D-printed, and assembled at 70% less cost than industry smart locks, and was well received by over 100 undergraduates, faculty, and industry guests

### Movie Review Sentiment Analyzer

- Built a recurrent neural network (RNN) in Python that performs sentiment analysis on movie reviews entered by users
- Trained RNN on a dataset of 50,000 IMDb reviews using TensorFlow, achieving 93.54% prediction accuracy

### NutriDiary: Adaptive Nutrition Tracker

- Architected a full-stack web application that logs daily nutrition data, and uses it to compute personalized calorie and protein intake recommendations to help users meet their fitness goals, using Java, Spring Boot, and PostgreSQL

## Education

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**The Cooper Union for the Advancement of Science and Art**

Sep 2016 — May 2020

Bachelor of Engineering in Electrical Engineering, specialization in Computer Engineering

Coursework: Data Structures & Algorithms, Software Engineering, Operating Systems, Natural Language Processing

## Certifications

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**AWS Certified Cloud Practitioner**

Dec 2023