

# JONATHAN CHEN

☎ 732-688-2846 ✉ [jonathanyangchen@gmail.com](mailto:jonathanyangchen@gmail.com) [linkedin.com/in/jonathan-y-chen](https://www.linkedin.com/in/jonathan-y-chen) [github.com/jonathanychen](https://github.com/jonathanychen)

## Education

---

### Northeastern University

*Bachelor of Science in Computer Science, Minor in Mathematics – GPA: 3.95/4.0*

**Aug. 2021 – Dec. 2024**

*Boston, Massachusetts*

## Relevant Coursework

---

- Algorithms and Data Structures
- Object-Oriented Design
- Networks and Distributed Systems
- Fundamentals of Software Engineering
- Artificial Intelligence
- Computer Systems
- Machine Learning
- Theory of Computation

## Experience

---

### Pacific Northwest National Laboratory

*Software Engineer Intern*

**May 2024 – Present**

*Seattle, Washington*

- Developed a comprehensive illicit finance analysis dashboard for over **30** analysts using **TypeScript, React, Python,** and **AWS**.
- Architected a flexible LLM API using **FastAPI** and **Pydantic** to streamline data analysis workflows for a team of **7** data scientists and engineers.
- Constructed a data ingestion service to process over **1.6 million** rows of financial data every week using the **AWS CDK Infrastructure-as-Code** solution to set up **Lambdas, S3 buckets,** and **SNS alerts**.
- Leveraged **HuggingFace embedding models** to perform semantic search on **20 TB** worth of financial documents.

### Instawork

*Software Engineer Co-op*

**January 2023 – June 2023**

*Boston, Massachusetts*

- Increased request throughput of a machine learning data analysis service by **47%** by architecting a flexible call semantic analysis pipeline using **Django, FastAPI,** and **Pydantic**.
- Deployed a centralized customer data dashboard used by over **15** business teams to allow for easy access to both raw data and complex statistics using **JavaScript** and **PostgreSQL**.
- Implemented over **35** RESTful endpoints using **Agile** development processes and **A/B testing** methods.

### Northeastern University

*Teaching Assistant*

**September 2022 – December 2023**

*Boston, Massachusetts*

- Assisted in teaching students the principles of **Java** and **Object-Oriented Design** by answering questions, grading assignments, and proctoring exams.
- Hosted over **100 hours** of office hours to provide students with a space for individual feedback and tutoring.

## Projects

---

### Couplet | *Golang, GORM, TypeScript, React Native, Expo, PostgreSQL*

**May 2024**

- Teamed up with 6 other engineers and 4 designers to build a dating app designed to connect people through common interest in events around Boston.
- Launched 13 REST API endpoints for the management of users, events, and organizations using Go, GORM, and PostgreSQL.
- Built seamless mobile app experiences with React Native and Expo.

### Distributed Key-Value Store | *Golang*

**April 2024**

- Designed a fault-tolerant distributed key-value store using Golang and the RAFT consensus protocol.
- Utilized local ports and UDP packets to simulate an unreliable network with various conditions, including packet loss, network delays, and data corruption.

### Faculty Syllabus Manager | *TypeScript, React, Python, Django, PostgreSQL*

**July 2023**

- Led a team of 9 students to design a course assignment creation and approval web-app for the faculty at Northeastern's London campus, using TypeScript, React, Python, and Django.
- Wrote a Python web scraping script to collect existing data for over 50 courses and automatically populate/update our AWS PostgreSQL RDS instance with the scraped data.

## Technical Skills

---

**Languages:** Python, Golang, TypeScript, Java, SQL, C, C++

**Technologies/Frameworks:** AWS (EC2, S3, Lambda, RDS), Git, Docker, Django, React, Node, FastAPI, Linux