

# Tong Cai

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## EDUCATION

- Northeastern University** Boston, MA  
*Master of Science in Computer Science; GPA: 4.00* Sep. 2023 – May 2026
  - Coursework:** Object-Oriented Design, Database, Algorithms, Data Structures, Web & Mobile Development
- The Chinese University of Hong Kong, Shenzhen Campus** Shenzhen, China  
*Bachelor of Business Administration in Finance* Sep. 2019 – May 2023

## SKILLS

Languages	Java, JavaScript, TypeScript, Python, C, C++, C#, Swift, R, Assembly
Frontend Technologies	ReactJS, NextJS, HTML, HTML5, CSS, Tailwind CSS, Angular, jQuery
Backend & Messaging	Spring Boot, Express.js/Node.js, Flask, Django, Redis, RabbitMQ, Kafka, Maven
Databases & Testing	PostgreSQL, MongoDB, MySQL, Oracle, SQL Server, JUnit, Mockito, Jest
Devops And Cloud	Docker, Kubernetes, Jenkins, AWS-EC2, S3, Hive, PostgreSQL
Other Tools	Visual Studio, MySQL Workbench, Linux, Unity

## EXPERIENCES

- ticker** Boston, MA  
*Software Developer* Jan 2025 – Aug 2025
  - Architected modular backend systems with **Spring Boot**, **Express.js/Node.js** and **Flask**, integrating **MongoDB**, **PostgreSQL**, **Redis**, and **RabbitMQ**. Designed onboarding, follow-logic, and **JWT** authentication, while optimizing data models to cut storage by 90%+ and improve query performance.
  - Migrated 7 microservices to **Kubernetes** with **Docker** and **Helm**, adding **HPA** and health checks for scalability. Built a **GitOps CI/CD** pipeline on **GCP**, cutting deployment time from hours to minutes.
  - Developed cross-platform apps with **React Native** and **TypeScript**, using modular components and shared types for consistent **UI/UX**. Improved load times by 40% with **AsyncStorage**, reducing redundant API calls.
  - Enhanced **Agile** workflow management by introducing **GitHub** reviewer rules, leveraging **Jira** story points, and enforcing clear deadlines to optimize **sprint** planning, workload distribution, and delivery predictability.
  - Led and mentored 5 junior developers and built a **Jira**-based ticket system that cut assignment time by 50%. Supported scaling to 1,000+ users, contributing to **Top 200** recognition at **TechCrunch Disrupt 2025**.
- China Securities Credit Investment** Shenzhen, China  
*Software Developer* Jun 2022 – Sep 2022
  - Designed and implemented data access layers for **PostgreSQL** and **MySQL** databases. Streamlined backend logic in **Django** to support dynamic queries and efficient data retrieval for APIs and internal dashboards.
  - Automated Excel workflows with **pandas/openpyxl** and a **Django** API, cutting 2 hours of manual work per month and training colleagues through clear documentation.
  - Built a lightweight **Django** tool using **smtplib** and **HTML** templates for dynamic emails. Added async scheduling via **RabbitMQ**, enabling colleagues to send campaigns 1 hour faster per cycle.
  - Adopted **Test-Driven Development**, creating robust unit tests that reduced production issues and improved confidence in API and automation workflows.

## PROJECTS

- Wordle Game (Website) – React.js, Spring Boot, AWS, Docker, Redis, Git** Boston, MA  
*Northeastern University* Dec 2023 – Jan 2024
  - Developed a full-stack Wordle game with a **TypeScript**-based **React** frontend (**Vite**) and a **Spring Boot** backend, deployed via **Docker** on **AWS EC2**. Wrote unit and integration tests with **JUnit** and **Mockito** to ensure backend reliability.
  - Implemented user authentication and session handling with **JWT** tokens to support secure, stateless API interactions. Integrated **Redis** for caching and token storage.
  - Built dynamic game logic with **React** hooks for responsive state management and real-time keyboard input, powered by a scalable **JSON**-based vocabulary dataset.
  - Deployed static frontend via GitHub Pages: <https://www.wordle-game.tong-cai.com/game>. Ensured backend availability and security through **AWS** monitoring and security groups.