

Bohan Lin

bohan0lin@gmail.com | (781)996-9202 | www.linkedin.com/in/bohan0lin

EDUCATION

Master of Science in Computer Science

Boston University - Boston, MA

GPA: 3.63

Expected May 2027

Bachelor of Science in Computer Science and Applied Mathematics

Brandeis University – Waltham, MA

GPA: 3.54

July 2023

TECHNICAL SKILLS

- **Programming Languages:** JavaScript, Python, Java, SQL
- **Frameworks & Libraries:** React Native, Node.js, Express.js, Spring Boot, Transformer.js
- **Database:** SQLite (Turso), MongoDB, PostgreSQL, MySQL, pgvector
- **Tools:** Git, Docker, RESTful APIs, JWT Authentication, CI/CD, Jest, Render, Tesseract.js

PROJECTS

BookEasy | Independent Project

Jan. 2026 – Present

- Architected and built a full-stack double-entry bookkeeping and bank-reconciliation platform using TypeScript, PostgreSQL, and on-device ML, automating the process of accounting entries matching bank transactions to reduce reconciliation time from 5 hours to less than 15 minutes per month.
- Built a bookkeeping dashboard with Next.js, React, and Tailwind, plus interactive P&L and balance sheet reports, giving non-accountant users a clear, real-time view of matched transactions.
- Implemented a double-entry accounting engine in Node.js API routes with Prisma and Zod, enforcing the debit-equals-credit logic inside database transactions.
- Designed a normalized PostgreSQL schema for journal entries and bank transactions using exact money type (numeric) to ensure financial precision, with pgvector columns enabling embedding-based similarity search.
- Built a local semantic-matching pipeline that runs entirely on-device — Tesseract.js OCR to extract text from invoice images and Transformers.js to generate embeddings — then matches products and categorizes transactions via pgvector nearest-neighbor search, feeding user-confirmed corrections back as labeled examples to eliminate manual categorization.

Study Buddy App | Lead Developer

Sep. 2025 – Dec. 2025

- Led a 6-person team to design, develop, and deploy a full-stack study productivity application using React Native and Express.js, featuring a virtual companion progression system, while owning technical architecture, task planning, sprint coordination, and feature delivery throughout the project life cycle.
- Implemented scalable React Native frontend architecture using component-based design and reusable UI modules, with state-driven virtual companion progression tied to study session completion, improving code maintainability and feature extensibility.
- Designed and implemented 20+ RESTful API endpoints across 6 backend modules for authentication, study tracking, statistics, and companion features, integrating JWT-based authorization and rate limiting to enhance security and reliability.
- Architected a normalized SQLite relational schema with 6 tables and 5 foreign-key relationships to support user accounts, profiles, study sessions, timer progress, and gamified buddy progression, enforcing one-to-one and one-to-many data relationships for consistent persistence and efficient querying.
- Developed an automated test suite using Jest and Supertest to validate authentication flows and protected API access, covering scenarios such as invalid JWT handling, unauthorized API requests, and session persistence, achieving 90%+ endpoint coverage and reducing regression risk during releases.
- Containerized frontend and backend services with Docker and Docker Compose, deployed the application to Render, and integrated GitHub Actions CI/CD pipelines for automated testing, linting, and image builds, improving deployment consistency and reliability.

INTERNSHIP EXPERIENCE

Software Engineer Intern

Mindray Biomedical Electronics (Global Medical Device Company)

Sep. 2020 – Dec. 2020

- Supported the full software development lifecycle of a clinical medical imaging platform (LV project) across 20+ application modules, contributing to feature development, backend improvements, automation, and release quality enhancements that reduced post-release defects by 20%.
- Collaborated with senior engineers to develop RESTful APIs for patient record management using Java, Spring Boot, and Spring MVC, implementing CRUD operations, input validation, and service-layer business logic.
- Integrated backend services with MySQL using SQL queries and database operations to store and manage patient records, ensuring data consistency and reliable access across clinical workflows.
- Designed and implemented automated testing scripts to validate patient record functionality, verifying API responses, database persistence, and data accuracy across different workflows, improving release confidence and reducing manual verification effort by 40% and saving over 10 engineering hours per month.
- Investigated and resolved 100+ software defects by analyzing application logs, reproducing issues, and collaborating with engineers to validate fixes before deployment.