

# Jiehoon Lee

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## EDUCATION

### Boston University

Bachelor of Arts in Computer Science

Boston, MA

Expected May 2026

## TECHNICAL SKILLS

**Languages:** Python, SQL(Postgre/Lite), Java, Javascript, Typescript, C, OCaml, HTML, CSS

**Frameworks:** React.js, Node.js, Express.js, Flask, Prisma

**Developer Tools:** Git, Docker, AWS, MongoDB, Firebase/Firestore, Apache Kafka, Agile, Figma, Jira, Blender

**Libraries:** Pandas, Numpy, Matplotlib, Beautifulsoup

## EXPERIENCE

### Software Developer Intern

Feb. 2025

Accelerant

Boston, MA

- Build layered machine learning models by analyzing customer data to identify churn indicators, enhancing predictive accuracy and proactively preventing customer churn.
- Develop API and ETL pipelines using Node.js and Express.js to integrate and preprocess customer data into a PostgreSQL database, enabling real-time analytics for timely churn intervention.
- Contribute to backend infrastructure setup by managing data operations using Prisma and AWS hosting, ensuring robust performance and scalability of customer analytics.

### Web Developer

Sep. 2024

Arché Journal

Boston, MA

- Enhanced user experience by designing and implementing responsive React components, including dynamic social media integration and visually distinct publication sections, improving navigation clarity and increasing user engagement by 23%.
- Migrated deployment from manual FTP uploads to automated Git-based workflow with AWS hosting optimization, reducing page-load time by 35% and simplifying content updates for future development teams.

### Software Engineer Fellow

Jan. 2024 – May 2024

BU Spark! Innovation Fellowship

Boston, MA

- Developed “chatsqrd”, an adaptive educational app leveraging conversational AI (OpenAI API) and speech recognition (ElevenLabs), boosting accessibility and engagement for children struggling with traditional learning.
- Presented “chatsqrd” at BU Spark Demo Day to mentors from RedHat, Microsoft, Plaid, etc.; incorporated user feedback from Agile Lean UX, increasing user engagement and satisfaction by 43%, winning Audience Choice Award.

## PROJECTS

### Stock Trading Platform | React.js, Flask, Docker, Python, Javascript, SQL, AlphaVantage API

Dec. 2024

- Developed a secure backend for user account management and stock trading transactions using Flask, SQLite, and password hashing, ensuring reliable performance and strong data security for portfolio management.
- Designed interactive visualizations of historical stock trends by integrating Alpha Vantage API endpoints with React frontend charting libraries, enabling users to analyze market data effectively.
- Containerized the application with Docker and implemented automated CI/CD pipelines using GitHub Actions, streamlining deployments, reducing downtime, and enhancing overall development efficiency.

### chatsqrd | React.js, Express.js, Node.js, Typescript, Javascript, Firebase, OpenAI API, ElevenLabs API

May 2024

- Implemented a hybrid Firestore database structure to efficiently manage conversation history by embedding recent messages and paginating older ones, reducing database read operations by 60%, optimizing performance and cost.
- Designed a secure, multi-layered authentication system leveraging Firebase Authentication, token refresh management, and custom Firestore security rules, ensuring comprehensive protection of users’ personal data.
- Built a fallback audio processing pipeline (MediaRecorder API and ElevenLabs integration) for speech-to-text transcription, providing seamless user experiences despite network or browser limitations.