

Farzad Ferdous

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EDUCATION

University of Massachusetts Amherst

Amherst, MA

Bachelor of Science in Computer Science, Minor in Business

Aug. 2022 – May 2026

Relevant Coursework: Data Structures and Algorithms, Accounting, Corporate Finance, Marketing, Programming Methodologies, Computer Systems Principles, Software Engineering, Computer and Network Security, Management, Principles of Data Science, Statistics, Project Management, Operations and Information Management, Computer Networks, Artificial Intelligence

EXPERIENCE

Software Engineer Intern

April 2025 – Present

Lexi

Cambridge, MA

- Contributed to a voice cloning system to personalize AI-driven medical translations, increasing perceived clarity and patient satisfaction by around **28%** in usability tests with limited English proficiency users.
- Built and deployed a Settings feature using React (frontend) and Go (backend) that enabled healthcare users to adjust translation playback speed and toggle voice cloning, improving accessibility and usability for healthcare providers by around **60%**.
- Designed and launched Lexi's public landing website using React and TailwindCSS, showcasing the platform's mission, differentiators, team, use cases, and awards, and integrated a dynamic contact form to increase engagement and partnership inquiries.

PROJECTS

Bullseye | *React, Alpha Vantage, Backtrader, PostgreSQL, OpenAI API, FastAPI*

February 2025 – May 2025

- Integrated GPT-4o into a trading platform to deliver real-time, data-driven buy/sell recommendations, combining live stock prices, historical trends, and financial news for AI-powered decision support.
- Developed a real-time portfolio dashboard using FastAPI, Redis, and Alpha Vantage, delivering dynamic metrics such as daily P/L, win rate, and live stock prices through a performant API and polling/websocket logic.
- Implemented backtesting and technical trading strategies, such as SMA crossover and RSI momentum indicators, enabling users to simulate trade performance and validate strategy effectiveness against historical market data.

Charm | *React, TypeScript, Springboot, DeepSeek API, PostgreSQL, Redis*

April 2025 – Present

- Built and deployed an AI-powered texting assistant using DeepSeek LLM, enabling users to generate emotionally intelligent, flirty, and context-aware message replies with tone customization (e.g., confident, romantic, witty).
- Designed and implemented a full-stack save chat system with secure backend integration (Spring Boot + PostgreSQL) and Redis caching, enabling fast retrieval of recent AI conversations and improving response time by over **40%**.
- Engineered a responsive React Native frontend with dynamic tone-based prompt control, increasing user engagement by over **35%** through interactive message crafting and feedback loop.

CodeStrike | *Firebase, React, Node, Socket.io, Docker, CodeMirror, Express*

September 2024 – December 2024

- Developed and launched Code-Strike, a competitive coding platform with real-time 1v1 coding battles, utilizing React (JS/TS) for dynamic front-end interfaces and Socket.io for real-time synchronization of timers, game updates, and code execution feedback.
- Implemented backend services with Node.js and Express, handling user authentication via Firebase, matchmaking logic, and database interactions, ensuring secure, high-performance real-time interactions and smooth user experiences.
- Integrated Docker to securely isolate and evaluate user-submitted code in scalable containers, preventing execution risks and enabling safe, efficient code testing in the platform's competitive environment.

TECHNICAL SKILLS

Languages/Frameworks: Java, Python, C, C++, JavaScript, HTML/CSS, SQL, React, Node.js, JUnit, Express.js, FastAPI, Springboot, Go/Golang, R

Developer Tools: GitHub, Visual Studio Code, Amazon Web Services, PyCharm, Vim, Docker, Terminal/Powershell, PostgreSQL, MongoDB, Firebase, Figma

Libraries: pandas, NumPy, scikit-learn, keras, TensorFlow, PyTorch, matplotlib, seaborn

Other Skills: Microsoft Office, Agile, Scrum, Jira