

# Ken Lu

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## EDUCATION

**Binghamton University, SUNY**  
*Bachelor of Arts in Mathematical Sciences*

Binghamton, NY  
Aug. 2020 – May 2024

## EXPERIENCE

### Headstarter AI

Aug. 2024 – Sept. 2024

*Software Engineer Fellow*

- Built and deployed 5 AI projects in 5 weeks using React JS, Next.js, Firebase, Clerk, and Vercel, following agile methodologies with weekly sprints and incorporated CI/CD practices for iterative deployment
- Worked in a team of 3 to develop an interactive customer support agent using Next.js, integrated a custom RAG pipeline using OpenAI and Pinecone that responds based on a company's knowledge base
- Implemented a web scraper that automatically extracts data and upsert to a Pinecone index, integrated with a RAG pipeline using LangChain and OpenAI GPT-4o to get up-to-date and relevant answers to user queries

### Freelance Developer

July 2024 – Aug. 2024

*Full stack developer*

- Produced an eCommerce web app for a client's using Ruby on Rails, leading to a 30% increase in online sales
- Managed the database schema to efficiently handle over 100 product listings and 100 customer records
- Integrated secure payment gateways to facilitate online transactions, processing over \$500 in sales per month
- Collaborated with the client to deliver a tailored solution, boosting their customer base by 20%

## PROJECTS

### Flash Prep AI | Co-Founder — Revenue Project

Aug. 2024 – Sept. 2024

- Created and launched an AI-powered flashcard application using Next.js, React, and TypeScript, integrating OpenAI for content generation and Clerk for user authentication, serving over 200 active users
- Used Stripe for payment processing, achieving a 10% conversion rate for premium plans

### Haive | Team Project

July 2024 – Aug. 2024

- Developed Haive, an AI chatbot platform with specialized chatbots for various fields, each utilizing a tailored RAG pipeline with Pinecone and OpenAI API to enhance conversational capabilities
- Implemented a modern UI using Next.js, React, and MUI, featuring user authentication and chat history management, deployed on AWS EC2, leading to a 50% reduction in load times and a 99.9% uptime

## ACTIVITIES & AWARDS

### Hiring Hackathon for Rilla | Finalist — 36 Hour Hackathon

Aug. 2024 – Sept. 2024

- Developed a sales transcript annotation tool for a hackathon using TypeScript, React, and Next.js, implementing features for annotating, commenting on transcripts, and AI summarizing
- Integrated a RAG pipeline with OpenAI and GPT LLM for AI summarizing, enhancing the tool's summarization capabilities
- Implemented a serverless backend with Node.js and AWS Lambda, processing daily CRUD operations with 50% reduced server costs and 99% uptime, as tracked by AWS monitoring tools

### University Club Match Quiz | 1st Place Winner — 24 Hour Hackathon

Jan. 2024 – Feb. 2024

- Developed a club match quiz for Binghamton University with enhanced personalization using Cheerio for web scraping, and HTML, CSS, and JavaScript for the frontend, improving quiz accuracy by 20% and user engagement by 30%
- Collaborated in a team of 4 to integrate web scraping, data conversion, and personalization algorithms, resulting in a cohesive and optimized user interface

## TECHNICAL SKILLS

**Programming Languages:** JavaScript, Ruby, Python, TypeScript, HTML/CSS, R

**Frameworks/Libraries:** React, Rails, Nextjs, Material-UI, NumPy, RSpec, Jest

**Technologies:** Git, VS Code, Firebase, Postman, MacOS, Linux