

Vaishak Menon

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WORK EXPERIENCE

Finchirp

Remote

Backend Software Developer

Aug 2025 - Present

- Architected real-time financial data integration system integrating **multiple third-party APIs** with caching layer and RESTful endpoints, enabling platform to deliver live market data to users **at scale** using Agile methodologies.
- Developed proprietary **multi-factor scoring algorithm** combining weighted data from multiple sources to identify market trends, with optimized query performance through **intelligent caching strategies**.
- Delivered full-stack features across **3,000+ LOC** in **2-week sprint cycles**, integrating multiple external APIs, designing database schemas, and managing migrations using Jira for project tracking and coordination.

University of Alabama at Birmingham

Birmingham, Alabama

Computer Science Teaching Assistant

Aug 2022 - May 2025

- Assisted in teaching **Data Structure and Algorithms** in Python and Java and **Systems Programming** in C.
- Provided feedback on **more than 400 assignments** each semester, maintaining less than **72 hour** turnaround time.
- Mentored students in core programming concepts, guided them through assignment completion, and delivered **in-depth code feedback** to accelerate skill development.

Maven Wave Partners

Chicago, Illinois

Infrastructure Intern

Jun 2023 - Aug 2023

- Authored comprehensive training documentation on **YAML/Terraform** and created interactive demos for cloud technologies, accelerating new employee onboarding and adoption of **Infrastructure as Code** practices.

Infrastructure Intern

Jun 2022 - Aug 2022

- Refined Terraform configurations to finalize a **scalable GCP environment** and streamlined deployment documentation to maintain consistent infrastructure management across the organization.

Infrastructure Intern

Jun 2021 - Aug 2021

- Engineered a secure data-sharing **microservice using Kubernetes**, enabling seamless data exchange between provider and third-party companies within a progressive GCP implementation.

EDUCATION

University of Alabama at Birmingham

Birmingham, Alabama

B.S in Computer Science

Graduation Date: Apr 2024

M.S in Computer Science

Graduation Date: May 2025

PROJECTS

Portfolio RAG Chatbot | Next.js 15, React 19, FastAPI, ChromaDB, Redis, Groq API

- Built a **real-time streaming** interface using **Next.js 15** and **Server-Sent Events (SSE)** to visualize "chain-of-thought" reasoning, backed by a secure **Edge Proxy** to mask API keys and ensure network resilience.
- Optimized retrieval via **hybrid semantic-lexical reranking** and **negative inference** detection, achieving **2.12s mean latency** and eliminating hallucinations for non-existent entities.

Pomodoro Focus | Next.js 15, React 19, TypeScript, PostgreSQL, Tailwind v4

- Developed a production productivity platform using **Next.js 15** and **React 19**, leveraging **React Server Components** for optimized rendering and **Tailwind CSS v4** for a responsive glassmorphism UI.
- Engineered a strict **Content Security Policy (CSP)** and custom **subdomain authentication** flow via **Clerk** to securely manage third-party media integrations and resolve cross-site cookie restrictions.

CERTIFICATIONS & SKILLS

Certifications: Certified Kubernetes Administrator, AWS Certified Cloud Practitioner, AWS Certified AI Practitioner

Skills: Python, TypeScript, React, Next.js, Java, C, FastAPI, PostgreSQL, Redis, Docker, Kubernetes, Terraform, GCP, AWS, Git