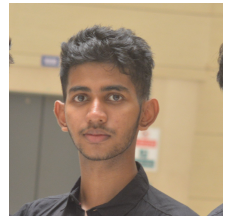


Aaron Thomas

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Full Stack Developer and AI Systems Engineer

Profile

Computer Science Engineering undergraduate specializing in scalable backend systems, modern web applications, and Retrieval-Augmented Generation (RAG) pipelines. Focused on building production-ready AI solutions and secure architectures with strong emphasis on performance, reliability, and maintainability.

Technical Skills

- **Languages** : Python, TypeScript/JavaScript, Rust, Java, Go
- **AI/ML Stack**: PyTorch, TensorFlow, LangGraph, LlamaIndex, vLLM, DeepSpeed, ONNX Runtime, MLflow, Embeddings
- **Databases**: PostgreSQL, MongoDB, Redis, Milvus, FAISS, Firebase, Supabase
- **Cloud & Containers**: AWS, GCP, Azure, Docker, Kubernetes, Cloud Functions
- **Frontend & Mobile**: Next.js, React, React Native, Tailwind CSS

Professional Experience

Software Engineering Intern

Thiruvananthapuram, KL

Stride, K-Disc

03/2026 - Present

- Developed scalable backend services and cloud functions for a Government of Kerala platform using Node.js and Firebase, supporting reliable service delivery under high-traffic usage.
- Implemented OWASP-aligned security testing, vulnerability assessment workflows, and release-level checks to improve protection of sensitive user data.
- Enhanced platform accessibility and interface performance by optimizing frontend workflows and reducing UI bottlenecks in key user journeys.

AI System Engineer

Kodakara, Kerala

Sahrdya College of Engineering and Technology

02/2026 - 03/2026

- Built scalable data ingestion and ETL pipelines using Node.js and Python.
- Engineered a Retrieval-Augmented Generation (RAG) system with embeddings and vector search.
- Optimized the system for low latency and high throughput using Docker, Kubernetes, and CI/CD.

Backend & Automation Developer

Kodakara, Kerala

Sahrdya College of Engineering and Technology

08/2025 - 02/2026

- Architected cloud-based backend systems using Firebase and Node.js.
- Built REST APIs and implemented workflow automation.
- Integrated CMS components and improved platform scalability, performance, and maintainability.

App Developer

Thrissur, KL

Xqlusive Software

08/2025 - 12/2025

- Engineered a mobile-first application using React Native with an offline-first architecture to improve data consistency during intermittent connectivity.
- Integrated Supabase for real-time geolocation tracking and high-frequency data synchronization.

Web Development Intern

New Zealand (Remote)

Pexcel Solutions

12/2024 - 06/2025

- Developed responsive frontend interfaces using React.js and Tailwind CSS, improving performance scores for international client projects.
- Integrated SEO best practices that increased organic search visibility for project deployments.

Technical Projects

RAG-based AI System

Sahrdaya RAGX

- Built an end-to-end RAG system with hybrid retrieval (BM25 + FAISS), reranking, and ETL pipelines.
- Implemented multi-route retrieval using SQL and graph-based querying for efficient, context-aware information access.

Full-Stack Platform

Sahrdaya Website & CMS

- Engineered and deployed the official college website with a scalable CMS architecture.
- Enabled efficient content management and a maintainable full-stack infrastructure for consistent updates.

Malayalam Programming Language

Amma

- Designed and implemented a custom interpreter in Rust to create a native-language programming environment.
- Engineered core constructs (variables, control flow, functions) to improve computing accessibility for native speakers.

AI-powered OSINT Platform

Aliens Eye

- Developed an AI-driven platform for large-scale social media intelligence gathering, featuring parallel scraping engines.
- Achieved community adoption with **400+ stars on GitHub**, demonstrating technical reliability and utility.

Adaptive AI Tutor

NeuroLearn

- Built an adaptive AI tutor for neurodivergent learners using LangGraph orchestration with personalized, goal-aware learning flows and guided remediation.
- Designed a RAG pipeline with vector search (Chroma), reranking, and grounding to deliver context-aware responses with mastery tracking and profile-based personalization.

AI-Centric Cyber-Physical System

CPS

- Engineered an AI-centric Cyber-Physical System (CPS) leveraging machine learning and real-time sensor streams for predictive monitoring and autonomous optimization of village-scale agriculture, energy, healthcare, crop health, and waste management.

Leadership & Volunteering

- **Coders Club Lead (IEDC Sahrdaya)**: Managed a community of student developers, organizing technical workshops and innovation challenges.
- **Mentor (TinkerHub)**: Guided peer developers through project architecture and modern development workflows.
- **Technical Team (IEEE Sahrdaya)**: Developed an attendance tracking system, flagship event websites, and event management applications.
- **ACES Webmaster (ACES Sahrdaya)**: Developed event websites, event management software, and registration workflow systems.

Education

B.Tech Computer Science

Sahrdaya College of Engineering

Kodakara, KL

2023-2027

Relevant Coursework: Distributed Systems, Retrieval-Augmented Generation, Networking (OSI Models), Data Structures.