Aswin CG

Software Engineer working on Generative AI systems and developer tooling

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EXPERIENCE

Software Engineer II   Oct 2025 – Present
UST, Trivandrum, Kerala, India

- Designed and implemented an **MCP server** enabling **AI-assisted developer workflows**, supporting tool orchestration, context sharing, and execution pipelines.
- Built an **agent-based documentation system** to analyze and generate documentation across **10k+ code files**, reducing manual effort from **weeks to days**.
- Developed **RAG pipelines** integrating **FAISS and PostgreSQL** to enable semantic search, contextual retrieval, and reasoning over large codebases.
- Architected **containerized backend services** for AI workloads, ensuring scalability, reproducibility, and efficient deployment.
  Tech: Python, FastAPI, LangGraph, FAISS, PostgreSQL, Docker,Kubernetes

Software Engineer I   Oct 2024 – Oct 2025
UST, Trivandrum, Kerala, India

- Built **CodeSense**, combining **static analysis with LLM-based reasoning** to detect bugs, security vulnerabilities, and maintainability issues.
- Designed **memory-augmented RAG workflows** to improve contextual understanding of legacy systems and enhance analysis accuracy.
- Developed a **multimodal resume parser** extracting structured data from diverse formats using LLM pipelines.
- Led development of **LLM-powered code modernization tools**, enabling transformations from **ASP to .NET** and **COBOL to Java**.
  Tech: Python, FastAPI, LangChain,LlamaIndex, Docker

Software Engineer Trainee   Jul 2024 – Oct 2024
UST, Trivandrum, Kerala, India

- Built backend modules including **authentication systems**, **REST APIs**, and database integrations for enterprise applications.
- Contributed to **CI/CD pipelines** and **containerized environments**, improving deployment consistency.
  Tech: Java, Spring Boot, MySQL, Docker,Jenkins

PROJECTS

AI Documentation Generator | *Python, FastAPI, LangGraph, PostgreSQL*   Internal Project

- Built an LLM-based system to generate structured documentation using agent-driven workflows.
- Designed pipelines for code traversal and dependency mapping to extract contextual insights.

CodeSense — AI Code Intelligence Platform | *Python, FastAPI, Static Analysis*   Internal Project

- Developed a platform combining static analysis with LLM reasoning for bug and vulnerability detection.
- Built scalable backend services for efficient analysis of large repositories.

Invento — Event Management Backend | *Node.js, Express, MongoDB*   GitHub

- Built and deployed backend APIs supporting 4,000+ users, 90+ events, and 1,000+ registrations.
- Implemented **payment processing** and **email notification systems** for seamless event registration and communication workflows.

SKILLS

Languages: Python, JavaScript, Java, TypeScript
Frameworks/Libraries: FastAPI, Express.js, Spring Boot, LangChain, LangGraph, React, Next.js
Tools: Docker, Kubernetes, AWS, GCP, FAISS
Databases: PostgreSQL, MySQL

EDUCATION

BTech in Computer Science and Engineering   Aug 2020 – May 2024
Govt. Engineering College, Sreekrishnapuram

CERTIFICATIONS

Microsoft Certified: Azure AI Engineer Associate