

Aarshia Verma

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OVERVIEW

CS undergrad specializing in **AI and Cloud development** - experienced in **RAG pipelines**, **FastAPI**, and containerized deployments on **Kubernetes** and **GCP**.

EDUCATION

Manipal Institute of Technology Bangalore <i>Bachelor of Technology in Computer Science(Cyber Security)</i>	July 2023 – May 2027 GPA: 8.1(Current)
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TECHNICAL SKILLS

Languages: Python, Java, C, Dart, Go

Frameworks: Flask, FastAPI, Streamlit, Flutter, SQLite, Git, REST API's, Tensorflow

Developer Tools: ChromaDB, LangGraph, HuggingFace Models, CUDA (learning basics), RAG, LLM's

Systems: Unix/Linux, Docker, Kubernetes, LangChain, Ollama, Google Cloud, AWS

EXPERIENCE

Intern

May 2025 – Aug 2025

The Linux Foundation

Project: Context-Aware Kubernetes Diagnostics for Telecom Using K8sGPT and RAG Pipelines



- Fine-tuned **DeepSeek LLM** on 5G telco specs, enabling K8sGPT to generate context-aware diagnostics for Kubernetes clusters with improved accuracy and relevance in live testing.
- Engineered a **RAG pipeline (LangChain + ChromaDB)** to inject domain knowledge, boosting context relevance for Kubernetes error explanations.
- Developed a **TypeScript/JS** interface to query live Kubernetes logs in natural language, enabling non-tech debugging.

PROJECTS

LawLight | Vertex AI, Pinecone, Python, Flask, Next.js, GCP, Firebase, LLM



- Architected an advanced **Retrieval-Augmented Generation (RAG)** pipeline using **Google Gemini (Vertex AI)** and a **Pinecone** vector database to perform deep contextual analysis of legal contracts, enabling features like **automated summarization**, **clause-by-clause risk flagging**, and a **document-aware Q&A chatbot**.
- Developed a full-stack, scalable application by developing a **Python (Flask) REST API** backend and a modern, responsive **Next.js (React)** frontend
- Deployed the entire solution on the **GCP**, containerizing the backend on **Google Cloud Run**, and orchestrating a serverless pre-processing pipeline with **Cloud Functions**, **Document AI (OCR)**, and **Translate API**.

NavCar - Indoor Parking Navigation System | Python, Flask, Flutter

- Built a Flask backend to serve parking slot data and navigation logic, handling 30+ dynamic slots with availability tracking.
- Enabled users to input slot numbers or license plates and receive step-by-step walking directions from kiosk to vehicle, simulating **real-time pathfinding**.
- Simulated indoor layouts with **30+ mapped slots, floor-level transitions, and obstacle-aware navigation**, demonstrating advanced 2D environment modeling.

AstroSynth - AI-Powered Astronomy Companion | Python, FastAPI, LLM

- Designed a scalable **RAG pipeline** architecture using **LangChain** and **ChromaDB** to deliver contextual insights.
- Integrated two astronomy APIs and engineered prompt chains to generate real-time, **LLM-based explanations** of **celestial events**, enhancing educational value.

ACHIEVEMENTS

Open Source & Research

- GSoC'25 Contributions to Astropy(2000+ stars)
- GSSoC'25 Ongoing Contributor
- Extended K8sGPT open-source project with GenAI RAG pipeline for Kubernetes debugging.
- Published author at GLEX 2025: Research on cryo-sleep as a long-term space travel solution.
- IAC 2025 Research: Proposed an AI-driven framework for enhancing exoplanet data analysis.

Competitive Programming

- Active LeetCode solver (100+ problems); top -18% on Codilio

Certifications

- Hugging Face - AI Agents: Build and Deploy with Transformers