

SUMEDHA PANDRAVADA

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PROFESSIONAL SUMMARY

Software Engineer with experience in backend systems, AI/ML, and cloud infrastructure. At Oracle, worked on MySQL Server core engineering and MySQL Database Service (OCI). Additionally delivered LLM pipelines, Retrieval-Augmented Generation (RAG), and agentic AI systems across internship and project work.

TECHNICAL SKILLS

Languages: Python, SQL, Java, C++, JavaScript, React, Vue.js

Backend: FastAPI, Flask, REST APIs, Distributed Systems

AI / ML: Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Agentic AI, Natural Language Processing (NLP), LangChain, Model Context Protocol (MCP), OpenAI Agents SDK, FAISS, YOLOv8

Databases: MySQL, PostgreSQL, MongoDB, Redis, Supabase

Cloud & DevOps: Amazon Web Services (AWS), Oracle Cloud Infrastructure (OCI), Kubernetes, Helm, Docker, Git, CI/CD

Testing & Process: Unit Testing, Debugging, Agile, System Design, OOPs

EXPERIENCE

Oracle | *Member of Technical Staff - 1*

Jul 2025 – Apr 2026 • Bengaluru, India

MySQL Server Engineering & MySQL Database Service (MDS) – Oracle Cloud Infrastructure (OCI)

- Fixed **3 sev-2 C++ bugs** in MySQL Server core – including a **9-year-old defect** escalated from an enterprise production incident, backporting patches across MySQL 8.0, 8.4, and trunk with full MTR validation.
- Mitigated **20+ severity-2 to severity-4** Oracle Cloud Infrastructure (OCI) MDS on-call incidents spanning out-of-memory failures, networking faults, and high-availability outages.
- Wrote a Python automation script processing **30–40 JIRA tickets/week** for a **15-member** engineering team, saving **~2 hours of manual triage effort per week**.
- Configured and shipped a Model Context Protocol (MCP)-connected LLM agent workflow in Codex to accelerate MySQL bug triage and root-cause analysis.

Axtria | *GenAI Intern*

Jan 2025 – Jul 2025 • Noida, India

- Built an internal **RAG Document Q&A System** (LangChain, FAISS, Azure OpenAI) enabling secure AI access to sensitive company documents; tested across **50+** documents with optimised chunk size, overlap, and top-k retrieval for answer relevance.
- Developed LLM-powered features including a marketing email generator (prompt pipelines over Excel, CSV, pdf, txt data) and a natural language data visualization feature generating and executing Matplotlib code.

Fanztar | *Full Stack Intern*

Jun 2024 – Dec 2024 • Remote

- Reduced content creation time by **~67%** via **GrapeJS** visual editor integration, automated PDFs generation and a **botoc3** pipeline to upload images and pdfs to **Amazon S3** and persist URLs in MongoDB.

PROJECTS

FinSight — *Python, FastAPI, React, Supabase, Google Gemini*

- Developed a real-time financial analytics platform ingesting live price data for **15+ stocks and crypto assets** every **60 seconds**, with Z-score anomaly detection across **3 severity tiers** (low / medium / high).
- Integrated Google Gemini 2.5 Flash with Ollama failover for AI-generated anomaly explanations; added a sentiment analysis pipeline with **6-hour caching** across **5 news headlines per asset** to reduce redundant API calls.

Research Agent — *Python, Ollama, OpenAI Agents SDK, Gradio* (github.com/sumedha0108/deep-research-agent)

- Architected a **3-agent** research system (planner, search, writer) using the OpenAI Agents SDK; the planner runs **5 parallel** DuckDuckGo searches, each summarised into **300-word** digests, producing **1,000+ word** Markdown reports via a Gradio interface.

Distributed Task Queue — *Python, Redis, FastAPI, Docker* (github.com/sumedha0108/task-queue)

- Built a multi-node task queue system supporting **4 async job types** with real-time status tracking and exponential backoff retry logic for failure recovery.
- Configured a **5-thread ThreadPoolExecutor** worker pool achieving **~40% faster throughput** compared to sequential processing.

Job Tracker and ATS Analyzer — *Python, FastAPI, React, PostgreSQL, Groq, Docker, Kubernetes*
(github.com/sumedha0108/job-tracker)

- Built a full-stack job tracker with LLM-powered ATS resume scoring (**llama-3.3-70b**) returning match score, missing keywords and AI-rewritten summary; voice mock interview system with 4-second silence detection and LLM evaluation.
- Containerised and deployed on **Kubernetes (minikube)** with ingress, persistent volumes, HPA auto-scaling (**1–5 replicas at 70% CPU**), and Prometheus/Grafana monitoring across **9 pods**.

Budget Manager Bot — *Python, LangGraph, FastAPI, PostgreSQL, LangChain, MCP, LLMs, Telegram API*
(github.com/sumedha0108/budget-agent)

- Built a multi-agent personal finance assistant using LangGraph and FastAPI, featuring an LLM-based supervisor that routes and chains **5 specialized agents and 10+ financial tools** across **18+ tested workflows**.
- Exposed tools as an **MCP server** enabling Claude Desktop integration with zero additional client code.

EDUCATION

Mahindra University

2021 – 2025

Bachelor of Technology in Computer Science • **CGPA: 9.05 / 10** • Academic Merit Scholarship – INR 4,00,000

National University of Singapore (NUS)

Jul 2023

Academic Research Programme

- Contributed to a YOLOv8-based safety gear detection model — curated the training dataset, integrated the detection pipeline into the frontend, and validated outputs achieving **80% precision** over **100 epochs**.

CERTIFICATIONS

AWS Training & Certification: Data Analytics Using Big Data (2023) • Agentic AI Engineer Track – Udemy