

Dhrumil Ankola

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Summary

M.S. in Computer Science specializing in engineering production-grade AI systems and scalable backend services. Proven ability to drive business outcomes, contributing to a 40% lift in user retention for platforms serving 200K+ monthly users. Skilled in the end-to-end development lifecycle, from building microservices on Kubernetes to implementing LLM/RAG pipelines and developing open-source database drivers

Experience

Shifa Precision Inc

06/2025 - Present

Software Engineer - AI/ML

Boston, MA

- Owning the backend development for Project Oasis, a proactive wellness engine that uses a Neo4j knowledge graph on AWS to generate patient "digital twins"
- Engineering a scalable data pipeline to unify biomedical data (ClinVar, PubMed, openFDA) into a knowledge graph with over 1M+ nodes and 10M+ relationships
- Building an AI-driven backend featuring LLMs for automated data extraction and a novel Graph Neural Network (GNN) framework for predictive health analysis

Center for Environmental Research and Technology

07/2024 - 04/2025

Assistant Software Developer

Riverside, CA

- Engineered a full-stack inspection platform (React, Laravel) for the California Air Resources Board (CARB), improving page-load times by 30% while serving 5,000+ monthly users
- Automated the regulatory data pipeline using AWS S3 and Glue, which enhanced data accuracy by 25% and enabled near-real-time reporting capabilities
- Implemented a Jenkins-driven CI/CD pipeline and authored comprehensive PHPUnit test suites, reducing deployment rollbacks by 30% for a system processing over 1 TB of data monthly

Devtown

05/2022 - 10/2022

Machine Learning Engineer

Bengaluru, India

- Engineered PyTorch GNN recommendation engine and Airflow ETL pipelines, improving accuracy by 60%
- Automated cross-region data pipelines, reducing data-validation errors by 35% and ensuring 99.9% data integrity across 50+ outlets
- Built Tableau dashboards that drove 40% lift in user retention among 200K+ monthly users

Projects

LLM-Powered Anomaly Detection for Microservices Reliability

GKE, Kubernetes, Docker, OpenTelemetry, Vertex AI (RAG), Go, Python

- Engineered a scalable polyglot microservices platform on GKE with a zero-downtime CI/CD pipeline
- Built an LLM-powered anomaly detection engine using PEFT (F1 \approx 0.90) and integrated Vertex AI RAG for contextual alerting; boosted detection precision and automated root cause insights, cutting resolution time by \sim 40%

Study Buddy - Berkeley CalHacks

React, Django, LangChain, RAG, Gemma 2, ChromaDB, ElevenLabs AI

- Built AI tutoring platform using Elevenlabs conversation AI and fine-tuned Gemma 2 (4-bit LoRA) for 90% response accuracy
- Integrated RAG with ChromaDB for context-aware retrieval; enabled interactive mind maps and voice-driven aids

PyAsterix - Database Driver for AsterixDB

Python, Pandas, AsterixDB, NoSQL, SQL++

- Developed PyAsterix Python driver for AsterixDB with Pandas integration and SQL-style queries
- Tuned connection pooling and serialization to cut query latency by 15% on 10 M+ record workloads
- Implemented AsterixDataFrame API mirroring Pandas, simplifying distributed filtering and aggregation

Education

University of California, Riverside

03/2025

Master of Science in Computer Science (GPA: 3.7)

BVM Engineering College, Anand, India

07/2023

B.Tech in Information Technology (GPA: 3.8)

Skills

Languages: Python, JavaScript, C++, SQL, NoSQL

Cloud & DevOps: AWS (S3, Glue, Lambda), GCP (GKE, Vertex AI), Kubernetes, Docker, Jenkins, OpenTelemetry, Git

AI/ML: PyTorch, TensorFlow, LangChain, RAG, Fine-Tuning (PEFT, LoRA), GNNs, LLMs (Gemma, Llama3, BERT)

Databases: MySQL, MongoDB, Neo4j (Graph), ChromaDB (Vector), AsterixDB (Distributed)

Frameworks & Libraries: React.js, React Native, Node.js, Django, Laravel, Express

Architecture & APIs: Microservices, Distributed Systems, GraphQL, REST

Testing & Methodologies: PyTest, PHPUnit, Selenium, Agile/Scrum, Jira