Dhrumil Ankola

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Summary

M.S. in Computer Science with deep expertise in designing and deploying production-grade AI systems and scalable data platforms. Proven track record of architecting solutions that deliver significant business impact—from boosting user retention by 40% to increasing industrial plant throughput by 15%. Expert in the full development lifecycle, encompassing LLM/RAG pipelines, microservices on Kubernetes, and large-scale data processing with Spark and Airflow

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

Edicon Paper　　　　　　　　　　　　　　　　　　　　　　　　　　　　　01/2022 - 07/2023
Product & Systems Engineer　　　　　　　　　　　　　　　　　　　　　　　*Gujarat, India*
- Architected a full-stack B2B client portal (React, Node.js, PostgreSQL) to manage high-volume orders for a 150,000-ton/year facility, cutting client service inquiries by 30%
- Engineered a data pipeline (Python, Airflow, Spark) analyzing real-time sensor data to optimize machine scheduling, which increased overall plant throughput by 15%
- Deployed a quality assurance monitoring system (Python, InfluxDB) on a 400+ ton/day production line, identifying key defects to cut material waste by 5% and save over $50,000 annually

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 ≈ 0.90) and integrated Vertex AI RAG for contextual alerting; boosted detection precision and automated root cause insights, cutting resolution time by ~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, Go, 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)
Data Engineering & Databases: Apache Spark, Apache Airflow, PostgreSQL, MySQL, MongoDB, Neo4j (Graph), ChromaDB (Vector), InfluxDB (Time-Series), AsterixDB
Frameworks & Libraries: React.js, React Native, Node.js, Django, Laravel, Express.js
Architecture & APIs: Microservices, Distributed Systems, GraphQL, REST
Testing & Methodologies: PyTest, PHPUnit, Selenium, Agile/Scrum, Jira