

Dhrumil Ankola

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Summary

M.S. in Computer Science with expertise in designing scalable full-stack systems serving 5,000+ monthly users. Open-source contributor (PyAsterix), improving AsterixDB Python driver performance by 40%. Independently integrated large language models into production, reducing inference latency by 25%. Strong foundation in data structures, algorithms, distributed architectures, and CI/CD pipelines

Experience

CE-CERT, UC Riverside

07/2024 - 04/2025

Assistant Software Developer

Riverside, CA

- Architected and implemented a React + Laravel inspection scheduling platform for CARB(California Air Resources Board), handling 10K+ vehicles/year and 5K+ monthly active users, with a 30% reduction in page-load times
- Spearheaded AWS S3 and Glue workflow redesign to automate data ingestion and validation, increasing regulatory-data accuracy by 25% and enabling near-real-time reporting
- Built PHPUnit test suites and integrated Jenkins-driven CI/CD, slashing deployment rollback incidents by 30% and supporting 1 TB+ of monthly data processing

Big-Data Lab, UC Riverside

09/2024 - 03/2025

Student Researcher

Riverside, CA

- 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

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

Education

University of California, Riverside

03/2025

Master of Science in Computer Science (GPA: 3.7)

- Relevant Courseworks: Big Data Management, Spatial Computing, Advanced Operating Systems, Design and Analysis of Algorithms, Advanced Database Management, Data Structures, Software Design Principles

BVM Engineering College, Anand, India

07/2023

B.Tech in Information Technology

Projects

Study Buddy - Berkeley CalHacks

React.js, Django, Hume AI, LangChain, Ollama, RAG, Google Gemma, ChromaDB

- Built AI tutoring platform using Hume AI EVI 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

CreateFlow - CalHacks 11.0

LLaMA-3 8B, LangGraph, LinkedIn API, PostgreSQL, React

- Designed LangGraph-based multi-agent system for content gen, scheduling, and analytics, halving creation time
- Enhanced LLaMA-3 8B with 4-bit quant and LoRA on LinkedIn data, boosting engagement predictions

Be Healthy

React Native, Firebase, OAuth 2.0, NFC Technology

- Designed modular GraphQL API (Node.js) with type-safe schemas and resolvers for patient, appointment, and NFC workflows
- Containerized microservices with Docker, Kubernetes, and CI/CD pipelines, enabling zero-downtime deployments and 30% faster releases

Skills

Languages: Python, JavaScript, C++, SQL

Databases: MySQL, MongoDB, NoSQL, AsterixDB, ChromaDB (Vector DB)

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

AI/ML: Large Language Models (Gemma, BERT, Llama3), RAG, PyTorch, TensorFlow, Fine-Tuning, Graph Neural Networks (GNNs)

Cloud & DevOps: AWS (S3, Glue, Lambda, EC2), Docker, Kubernetes, CI/CD Pipelines, Jenkins, Git/GitHub

Testing: pytest, PHPUnit, Selenium

Tools & Methodologies: Microservices, Distributed Systems, Agile/Scrum, Jira, OAuth 2.0