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
Assistant Software Developer

07/2024 - 04/2025
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
Student Researcher

09/2024 - 03/2025
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
Machine Learning Engineer

05/2022 - 10/2022
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
Master of Science in Computer Science (GPA: 3.7)

03/2025

- 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
B.Tech in Information Technology

07/2023

Projects

LLM-Powered Anomaly Detection for Microservices Reliability
GKE, Docker, Kubernetes, OpenTelemetry, Cloud Monitoring/Logging, Grafana Tempo, Vertex AI (PEFT & RAG), Java, Go, Node.js, Python, .NET

- Architected and deployed a scalable, polyglot microservices platform on GKE; implemented OpenTelemetry-based observability and automated CI/CD pipelines enabling zero-downtime releases
- 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.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

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