Gopala Bhamidipati

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EDUCATION

University College London Sep 2024 – Sep 2025
MSc Artificial Intelligence and Data Engineering, Merit London, UK

- Relevant Coursework: Engineering for Data Analysis, Software Development Practice, Requirements Engineering and Software Architecture, Introduction to Machine Learning, Applied Deep Learning

Queen Mary, University of London Sep 2021 – Jun 2024
BSc Computer Science, First Class Honours London, UK

- Relevant Coursework: Big Data Processing, Database Systems, Distributed Systems, Algorithms and Data Structures, Software Engineering, Object-Oriented Programming, Neural Networks and Deep Learning

SKILLS

Languages: Python, SQL, Java, Go, C#, PHP
Data & AI: ETL/ELT Pipelines, Data Modelling (Star/Snowflake), Apache Spark, Hadoop, Pandas, NumPy
DevOps & Cloud: Linux, Docker, Kubernetes, Terraform, Ansible, RabbitMQ, Redis, Git, Prometheus, Grafana
Web & APIs: FastAPI, Django, React, JavaScript, HTML, CSS

EXPERIENCE

AI Software Engineer Jun 2025 – Sep 2025
International Federation of Red Cross and Red Crescent Societies London, UK

- Engineered and deployed Python-based data ingestion and transformation pipelines for the IFRC GO platform processing large-scale unstructured data at a global scale as part of a UCL IXN project
- Implemented LLM summarisation workflows using Azure OpenAI, supporting global operational analytics
- Reduced emergency report processing time from hours to minutes, accelerating decision-making and enabling real-time operational learning across international response teams
- Built scalable data workflows to modernise legacy systems, improving response efficiency and reducing information redundancy

Teaching Assistant Sep 2022 – Dec 2022
Queen Mary, University of London London, UK

- Improved 50+ students' performance by simplifying complex computing concepts such as binary representation and assembly language, ensuring accessibility for learners from diverse backgrounds

PROJECTS

Task Orchestration Platform (*Python, FastAPI, Celery, RabbitMQ, Redis, Kubernetes)* Nov 2025 – Dec 2025

- Implemented a distributed task orchestration system with explicit job lifecycle management, including submission, state transitions, and failure handling
- Built a Redis-backed control plane to persist job state across services, ensuring consistency and recoverability under restarts
- Exposed a FastAPI control API to submit jobs and query execution state, separating orchestration and execution
- Integrated RabbitMQ for durable message queuing, enabling independent scaling of API and worker services
- Deployed and operated the platform on Kubernetes using containerized services and service-based networking

Distributed Data Processing System (*Python, Terraform, Ansible, Spark, ETL, BeeGFS)* Jan 2025 – Apr 2025

- Designed and provisioned a scalable distributed ETL data processing pipeline across a 5-node cluster
- Implemented Apache Spark's batch processing jobs, leveraging BeeGFS for high-throughput parallel data storage and I/O-intensive workloads
- Achieved 35-hour continuous data processing with zero downtime under sustained load testing
- Automated infrastructure provisioning with Terraform and configuration management with Ansible, enabling reproducibility
- Deployed Prometheus and Grafana for real-time cluster monitoring and system metrics visualisation
- Secured cluster access using SSH key-based authentication and host-based firewall configuration

Reddit Sentiment Summariser (*Python, Django, HTML, CSS, JavaScript, SQL)* Sep 2023 – Jun 2024

- Developed a web application for analysing Reddit content, implementing VADER and Pegasus-X for sentiment analysis and text summarisation, using REST APIs to automate data mining across 100+ Reddit posts
- Reduced API latency by 30% by refactoring a scaling Django backend and adding SQL-based authentication