

Jayanth Shanmugam

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EDUCATION

University at Buffalo - SUNY

Master of Science, Computer Science and Engineering

Buffalo, NY

June 2026

Manipal Institute of Technology

Bachelor of Technology, Computer Science and Engineering

Manipal, India

July 2023

WORK EXPERIENCE

Data Engineer

Adani Wilmar Ltd.

Hyderabad, India

August 2023 – April 2024

- Orchestrated end-to-end ELT migration from Qlik to Power BI using Python and SQL, implementing rigorous data validation frameworks that ensured 100% data accuracy throughout the platform transition.
- Developed and optimized machine learning pipelines using Python, Kubeflow, and Apache Airflow, resulting in a 75% reduction in manual interventions and significantly accelerating model deployment cycles.
- Architected high-performance ETL pipelines leveraging Google Cloud DataFusion, Apache Airflow, and SQL to streamline data transfer from SAP HANA to BigQuery, delivering a 60% improvement in data processing speed.
- Enhanced the vendor recommendation system by expanding its capability to analyze all purchased commodities, driving strategic sourcing decisions that resulted in 10% cost reduction in procurement operations.

Data Science Intern

Adani Wilmar Ltd.

Hyderabad, India

February 2023 – August 2023

- Led enterprise-wide implementation of Generative AI solutions on Google Cloud Platform (GCP), resulting in 35% improved operational efficiency.
- Architected and deployed comprehensive KPI frameworks for analytics initiatives, creating real-time Power BI dashboards that increased data visibility for 200+ stakeholders across the Google Cloud Data Lake ecosystem.
- Engineered an end-to-end machine learning pipeline using Python, Kubeflow, and Vertex AI that streamlined the vendor recommendation system, achieving 80% reduction in system maintenance.
- Redesigned vendor recommendation algorithms using Python NumPy and BigQuery SQL optimizations, delivering 20% cost savings and reducing computation time from 2 hours to 45 minutes per analysis cycle.

Deep Learning Research Intern

Samsung Research Institute

Bangalore, India

January 2022 – September 2022

- Led research initiatives to optimize deep-learning model performance for embedded systems using the NNTrainer framework, focusing on resource-efficient deployment strategies.
- Engineered an automated Python-based conversion pipeline that transforms models to NNTrainer format via ONNX, accelerating workflow efficiency by 20% and streamlining the deployment process.
- Enhanced the existing ResNet18 model architecture, achieving an 18% reduction in training loss compared to baseline performance through targeted optimization techniques.

PROJECTS

Genius Kitchen | Python, Streamlit, Firebase, Gemini, Google Cloud Run

- Led a team to top 10 placement among 30,000 competitors in the Google GenAI Hackathon APAC Edition.
- Architected and launched an AI-powered recipe generation platform, combining Gemini LLM with Streamlit to deliver personalized cooking recommendations based on user preferences and dietary restrictions.
- Engineered a multimodal content generation system by integrating Imagen and Text-to-Speech APIs, enabling dynamic creation of visual and audio instructions for enhanced user experience.

Newsly.ai | Python, Flask, Bootstrap, Gemini, Google BigQuery, Google Cloud Run

- Built a robust web scraping solution using Python and Playwright that automatically aggregates news content across 5+ websites and 6+ categories, ensuring comprehensive real-time information gathering.
- Spearheaded the integration of Google Gemini API with custom web scraping tools to automate news summarization and keyword extraction, resulting in a 35% boost in team productivity.
- Designed and implemented a responsive web interface using Flask and Bootstrap, successfully containerized and deployed the application on Google Cloud Run for scalable performance.

TECHNICAL SKILLS

Python (Pandas, NumPy, scikit-learn, PySpark, matplotlib, Flask, Beautiful Soup, Selenium, Playwright), SQL, Google Cloud Platform (Cloud Storage, BigQuery, Vertex AI, Data Fusion, Cloud Composer, Cloud Run, Cloud Functions, Artifact Registry), Docker, Kubeflow Pipelines, Apache Airflow, Apache Spark, Power BI, MySQL, Microsoft Office Suite.