

Jayanth Shanmugam

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Education

M.S. in Computer Science, University at Buffalo

Expected December 2025

B.S. in Computer Science, Manipal Institute of Technology

July 2023

Experience

Tesla

Palo Alto, CA

Data Engineer Intern

May 2025 - August 2025

- Built a workflow monitoring dashboard for GitHub actions using Python, Streamlit, and GitHub REST API, cutting analytics job failures by 45%
- Optimized SQL queries and implemented data warehousing strategy in MySQL, improving Airflow ETL runtime from 2 hours to 45 minutes
- Designed Python dashboards using Streamlit and matplotlib for waste management at service centers, projected to save \$100K annually
- Developed an Airflow ETL pipeline to extract error logs in Splunk from the warehouse management system to MySQL for analysis, reducing inbound errors at warehouses by 30%

Adani Wilmar

Hyderabad, IND

Data Engineer

August 2023 - April 2024

- Developed ETL pipelines in Airflow and SQL for data platform migration to Google Cloud (GCP), achieving 99% data integrity and accuracy
- Optimized Airflow ETL pipelines for data warehouse migration from SAP HANA to Google BigQuery, improving pipeline runtimes by 40% on average
- Automated machine learning workloads into pipelines on Airflow, reducing system maintenance efforts by 70%
- Designed an email alerting system in Airflow for monitoring ETL pipelines on Google Cloud DataFusion, enabling 60% faster resolution of pipeline issues

Data Science Intern

February 2023 - August 2023

- Assisted in developing standardized metrics and reporting dashboards in Power BI, improving data visibility to 200+ stakeholders across the organization
- Implemented a k-means clustering based solution using Python and scikit-learn to rank vendors on raw material quality, saving ~\$560K annually on procurement costs
- Built ETL pipelines from SFTP servers to Google BigQuery using Airflow and SQL, cutting down data load time from 3 hours to 20 minutes

Projects

Genius Kitchen: AI Powered Recipe Generation | Python, Gemini, Streamlit, Firebase

- Ranked top 10 among 30,000 participating teams at the Google GenAI Hackathon (APAC)
- Built a recipe-generation chatbot using Gemini; with multi-modality using Imagen + Text-to-Speech APIs
- Designed the backend database in Firebase to store user information and generated recipes

PaperSphere: AI Agent for Academic Resource Recommendation | Python, Llama LLM, NLTK, Postgres

- Developed a recommendation system using Python and NLTK to match users with academic resources
- Designed an AI agent using Llama 3.1 that understands user intent and a conversational interface
- Built a chatbot interface in Python using Streamlit for the agent, utilizing PostgreSQL as the backend

Skills

Languages: Python (Pandas, Numpy, scikit-learn, PyTorch, matplotlib, Streamlit), SQL, C, Java

Technologies: BigQuery, MySQL, PostgreSQL, Google Cloud, Power BI, Airflow, GitHub, Splunk, Docker