

Yashaswini Chowdary Madineni

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EDUCATION

San Jose State University

San Jose, CA

Master of Science in Data Science

Jan 2024 – May 2025

- **Relevant Coursework:** Machine Learning, Algorithms, Generative AI, Deep Learning, Big Data, Database Systems, Distributed systems, Statistics

Visvesvaraya Technological University

Bangalore, India

Bachelor of Technology in Computer Science

Aug 2018 – May 2022

EXPERIENCE

Software Engineer

May 2022 – Jan 2024

Tata Consultancy Services (TCS)

Bangalore, India

- Designed and maintained scalable **ETL pipelines** using **Python, SQL, Snowflake, and AWS (Redshift, Glue, S3, EMR)**, improving data flow efficiency by 20% through A/B testing.
- Engineered batch and streaming data pipelines with **Apache Spark, Hadoop, and BigQuery**, optimizing query execution for large-scale analytics and reducing query latency by 30%.
- Containerized and orchestrated data workflows with **Docker** and **Kubernetes**, enabling reproducible deployments and improving scalability and fault tolerance in production environments.
- Built interactive dashboards with **Tableau** to deliver data-driven insights, collaborating with product managers, data scientists, and platform engineers to translate requirements into scalable solutions.

Data Science Intern

Jun 2021 – Aug 2021

Tequed Labs

[Bangalore, India]

- Developed and evaluated Machine Learning models (**Logistic Regression, Random Forest, SVM**) using **Scikit-learn**, improving predictive accuracy on structured datasets by 15%.
- Implemented deep learning experiments in **PyTorch** and **TensorFlow**, building & testing neural networks for classification on real-world data. Built analytics workflows in **Python (Pandas, NumPy, PySpark)** to preprocess and engineer features from large-scale datasets, reducing data preparation time by 20%.
- Conducted **exploratory data analysis (EDA)** and created dashboards with **Tableau** and **Power BI**, enabling stakeholders to identify key business trends.

PROJECTS

LLM-Powered Text-to-SQL with AI Agents | *LangChain, LLaMA-3, Gemini, OpenAI, Flask, Docker, CI/CD*

- Built a GenAI pipeline that translates natural language to SQL using **LLaMA-3, Gemini, and OpenAI GPT-3.5** agents, deployed with Flask and Docker and evaluated on the Spider dataset.

Agentic AI Systems: RAG, Stable Diffusion Fine-Tuning, Travel Assistant | *FAISS, Gemini, Stable Diffusion, LoRA, PEFT*

- Developed multi-agent systems including a **RAG pipeline, LoRA fine-tuned Stable Diffusion**, and a travel assistant with Flight/Weather/Hotel/Itinerary agents orchestrating APIs.

Deep Learning for Skin Cancer Segmentation & Classification (ViT-UNet) | *PyTorch, Vision Transformer, U-Net*

- Implemented a hybrid **ViT and U-Net** model for lesion segmentation and classification on ISIC datasets, achieving Dice score 0.905 and Accuracy 83%.

Healthcare Prediction with Machine Learning | *React, Flask, Scikit-learn, GCP*

- Built a full-stack healthcare prediction system with **React, Flask**, integrating Machine learning models and deployed on **GCP App Engine and Cloud Storage** with IAM-based security.

AI Mock Interview Practice Platform (In Progress) | *Python, SQL, NLP, LLMs, Cloud*

- Developing an **AI-powered mock interview platform** that generates adaptive questions, evaluates responses, and delivers instant feedback using **LLMs and cloud-native pipelines**.

TECHNICAL SKILLS

Languages & Systems: Python, C++, Java, SQL, JavaScript, C

Distributed & Data Processing: Apache Spark, PySpark, Hadoop, Databricks, Apache Airflow

Compute & DevOps: GPU/FPGA acceleration, Docker, Kubernetes, Terraform, Git, GitHub Actions, Jenkins, Microservices

Cloud Platforms: AWS (EKS, S3, Lambda, Redshift), Azure, GCP, Snowflake, BigQuery

AI/ML: PyTorch, TensorFlow, Scikit-learn, Hugging Face, Generative AI, RAG, LLMs, LangChain

Databases & Storage: PostgreSQL, MongoDB, DynamoDB, NoSQL, High-volume storage systems

Visualization: Tableau, Looker, Power BI

CERTIFICATIONS

AWS Certified Cloud Developer, Azure Developer Associate(AZ-204)