

# Shashank Mankala

📍 Buffalo, New York

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🔗 shashank-mankala1.github.io/portfolio

## Education

**State University of New York at Buffalo**

*Master's in Data Science (GPA: 3.9/4.0)*

*Aug 2024 – Present*

*New York, USA*

**Lovely Professional University**

*Bachelor's in Computer Science and Engineering (GPA: 3.6/4.0)*

*Aug 2019 – May 2023*

*Punjab, India*

## Experience

**Lead Data Analyst**

*Shadowfax*

*Dec 2023 – Jul 2024*

*Bangalore, India*

- Achieved 98% accuracy in cleaning employee database, a company-first in its 9-year history
- Leveraged analytical insights to optimize manpower allocation in the East region, boosting productivity by 60%
- Drove 60% efficiency gains by delivering actionable insights from in-depth hub performance analysis

**Software Engineer Intern**

*Frugal Testing*

*Jun 2022 – Jun 2023*

*Hyderabad, India*

- Created and implemented automation frameworks for 4 diverse projects, reducing manual testing and increasing efficiency by 30%
- Played a key role in developing the Central Bank Digital Currency (CBDC) product in collaboration with NPCI, performing and publishing it globally
- Pioneered test methodology improvements through rigorous data analysis, informing cross-functional teams and cutting down testing cycle times by approximately 20% across four projects

## Projects

**TutorMind - GenAI-powered Personalized Tutor**

[LINK](#) 🔗

- Developed a full-stack RAG-based GenAI application using LangChain, FAISS, and OpenAI to enable question answering from user-uploaded curriculum materials (PDFs, notes, videos)
- Integrated feedback-driven dual-model(factual + conceptual), ensuring high answer accuracy with zero hallucination
- Built custom user authentication, session-based Q&A history, and document-specific embedding logic

**Real-Time Crypto Trading Dashboard with ML & Streamlit**

[LINK](#) 🔗

- Engineered a **real-time cryptocurrency trading pipeline** using dockerized microservices on **Google Cloud Platform (GCP)**, integrating Redpanda, Streamlit, and scheduled jobs via cron and tmux
- Developed 6 modular services for historical data backfill, real-time trade streaming (handling 1,000 trades/sec), 1-minute candle generation, price prediction using LightGBM (achieving 78% F1-score), and strategy execution via a rule-based trade bot
- Launched an interactive Streamlit dashboard visualizing live signals and predictions, enabling real-time monitoring of 10 cryptocurrencies and strategy performance (e.g., ROI, win rate)

**Diabetes Prediction using Machine Learning**

[LINK](#) 🔗

- Designed a complete **end-to-end pipeline** to predict diabetes based on health attributes e.g., BMI, HbA1c level, blood glucose levels, and smoking history
- Delivered a real-time diabetes prediction model via FastAPI, Docker, and Google Cloud Run, enabling real-time risk assessments with 85% accuracy through a user-friendly **Streamlit** app

## Skills

**Programming and Scripting:** Python, SQL, R, C++, MATLAB, Javascript, HTML/CSS

**Machine Learning and AI Technologies:** Machine Learning, AI, NLP, LLM, PyTorch, TensorFlow, LangChain

**Development & Data Tools:** Docker, DagsHub, Apache Spark, Git, Jupyter Notebook

**Data Visualization:** Tableau, Power BI, Looker Studio

**Cloud & Big Data Platforms:** AWS, Google Cloud (GCP), Snowflake, Databricks

**Database Systems:** MySQL, PostgreSQL, Neo4j, MongoDB