

STUTI SHRIMAL

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EDUCATION

University of Maryland Master of Science in Information Systems	College Park, MD, USA Dec 2024
University of Mumbai Bachelor of Engineering in Information Technology	Mumbai, MH, India May 2020

TECHNICAL SKILLS

- Programming Languages: Python, R
- Visualization: Tableau, Excel
- ETL Tools: Informatica PowerCenter, Informatica Big Data Management, Informatica Intelligent Cloud services
- Cloud Platforms: AWS
- Databases: MySQL, Databricks, MySQL Workbench, MongoDB, Neo4j
- Big Data Technologies: Hadoop, Apache Pig, Spark, Hive

PROFESSIONAL EXPERIENCE

Adaptive Waves Data Engineer	Boston, MA, USA Mar 2025 – Present
<ul style="list-style-type: none">• Built an AI-powered chatbot using large language models (LLMs) that converts natural language into executable SQL queries, enabling automated data retrieval and improving query efficiency by 60%.• Designed and deployed a data-driven application that accepts user input and stores it in PostgreSQL, while also supporting interactive visualizations from both local uploads and MongoDB sources.• Integrated AI with multi-source data pipelines, combining LLM, PostgreSQL, and MongoDB to deliver an end-to-end solution for intelligent querying, data ingestion, and real-time analytics.	
Jio Platforms Limited (JPL) Data Science Intern	Mumbai, MH, India Jun 2024 – Aug 2024
<ul style="list-style-type: none">• Developed an AI-powered Streamlit application integrating the Phi-3 LLM to generate SQL queries from natural language, enhancing non-technical user access to complex databases.• Fine-tuned the Phi-3 model using Ollama and structured schema inputs, improving SQL query accuracy by 40% and enabling support for multi-join, aggregate, and nested queries.• Implemented LangChain and Retrieval-Augmented Generation (RAG) to enhance factual grounding and contextual relevance, leading to more reliable query generation and real-time results visualization.	
Accenture Solutions India Pvt. Ltd. Data Engineering Analyst	Mumbai, MH, India Jan 2021 - Jun 2023
<ul style="list-style-type: none">• Led automation efforts that earned the Accenture Celebrates Excellence (ACE) Award (2022), and secured a Merit in Informatica Course Training (2021) for contributions to ETL process optimization.• Designed and deployed 50+ data pipelines using ETL and BI tools, integrating data from diverse sources into repositories that supported over 1 million healthcare users.• Migrated 600+ healthcare data mappings to the cloud using SQL, IICS, AWS, and Databricks, achieving a 40% improvement in data loading speed and operational efficiency.• Managed a cross-functional team of 6, overseeing CRM and data integration via JIRA and ServiceNow, maintaining 100% SLA compliance and a consistent 5-star client satisfaction rating.	

PROJECTS

Portfolio Analysis
<ul style="list-style-type: none">• Constructed a multi-asset portfolio using technical strategies (Moving Averages, Bollinger Bands) across stocks, commodities, currencies, and bonds, optimizing for Sharpe ratio and risk-adjusted returns under portfolio constraints.• Achieved a Sharpe ratio above 1.0 by selecting low-correlation instruments, enhancing portfolio stability, and minimizing volatility through strategic parameter tuning.
Credit Risk Assessment
<ul style="list-style-type: none">• Created a logistic regression model to identify key variables for assessing loan default risk, achieving an accuracy of 80.9%.• Fine-tuned a language model using these variables to generate concise, interpretable credit risk reports for end-users.• Enhanced transparency and decision-making in loan processing by replacing traditional methods with AI-driven insights.
Traffic Violation Analysis
<ul style="list-style-type: none">• Analyzed a dataset of over 100,000 traffic violations from the Montgomery County database, conducting exploratory data analysis, geospatial analysis, time-series analysis, and data visualization.• Formulated relevant hypotheses and drew insights to guide public policies, traffic enforcement strategies, and awareness campaigns, presenting findings to stakeholders.

CERTIFICATIONS

- Generative AI Fundamentals: Databricks (June 2024)
- Machine Learning A-Z™: Python & R in Data Science: Udemy (Dec 2022)
- AWS Fundamentals Specialization: Coursera (Sept 2020)
- Python Data Structures: University of Michigan (Aug 2020)
- Programming for Everybody (Getting Started with Python): University of Michigan (July 2020)