GAYATRI SIVANI SUSARLA

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SUMMARY

Aspiring Data Scientist pursuing a Master's degree, passionate about Big Data Analytics and large Language Models. Actively seeking opportunities to collaborate on impactful projects and grow professionally in the data science domain, focusing on solving real-world challenges and driving impactful results. Eager to contribute to the evolution of the field while continuously growing professionally.

EDUCATION

STONY BROOK UNIVERSITY   Stony Brook, NY
Master of Science | Data Science   Expected Dec 2025
Relevant Coursework: Statistical Learning, Statistical Computing, Computer Science Theory, Programming Abstractions, Big Data Systems, Data Analysis, Data Structures and Algorithms, Large Language Models, Data Management

ADIKAVI NANNAYA UNIVERSITY   Andhra Pradesh, INDIA
Bachelor of Technology | Electronics & Instrumentation Engineering   Jun 2018 - May 2022

WORK EXPERIENCE

INFOSYS PRIVATE LIMITED   Hyderabad, INDIA
Systems Engineer   Jul 2022 – Dec 2023
- Specialized in SAP Business Intelligence, experienced in global ETL processes for client company P&G, ensuring efficient data load operations, server health checks, and error resolution across multiple time zones using SAP BW Workbench
- Monitored and optimised process chains, pipelines, ensuring efficient and accurate data flow in client's business warehouse
- Gained hands-on experience in data integration, data visualization using SAP Analytics Cloud, Snowflake, and Azure

BHARAT HEAVY ELECTRICALS LIMITED   Visakhapatnam, INDIA
Student Intern   April 2021
- Inspected the various CNC machine facilities at BHEL
- Analyzed the working of Computer Numerical Control Machines (CNC)

UNIVERSITY PROJECTS | Stony Brook University

QUANTUM SEARCH ALGORITHM |Prof. Zhenhua Liu|AMS   Aug 2024 – Dec 2024
- Implemented the Adaptive-Grover algorithm using the Qiskit library, and analyzed different real-world dataset distributions
- Conducted a comprehensive performance analysis, optimized quantum search operations on weighted databases
- Compared algorithm time complexities with linear search $O(N)$, and attained complexity of $O(\sqrt{N})$ for quantum search
- Introduced enhancements to Grover's search algorithm, focusing on improved implementation strategies and scalability

BASKETBALL OUTCOME PREDICTION |Kaggle Competition|Prof. Wei Zhu|AMS   Jan 2024 – Apr 2024
- Applied machine learning algorithms to predict outcomes in the NCAA March Madness basketball tournament
- Worked collaboratively in a team to develop, test, and validate different predictive models on historic data
- Used Logistic Regression, Random Forest, and Gradient Boosting models to predict outcomes. Our team attained 0.89 model accuracy in the Kaggle Competition

R PACKAGE |Prof. Pei Fen Kuan|AMS   Jan 2024 – Apr 2024
- Created an R package for regression analysis of high-dimensional data with the following features
- Correlation Calculation: Computes the Pearson correlation coefficient between each predictor and the response variable
- Ranking Predictors: Orders predictors by the absolute value of their correlation coefficients
- Selection of Top K: Retains the top K predictors, specified by the user, for subsequent model fitting

LLM PROJECT |Prof. Jiawei Zhou|AMS   Jan 2025 – Present
- Development and Implementation of Self-Instruct Model: Self-Instruct-based approach to align language models with self-generated instructions, enabling improved adaptability and performance in generating task-specific responses with minimal supervision.
- Bootstrapped Reasoning Capabilities: Investigating techniques for bootstrapping reasoning in large language models, enhancing the model's ability to reason over complex problems through structured iterative learning and self-correction mechanisms.

ADDITIONAL PROJECTS

EXPLORATORY DATA ANALYSIS (EDA) PROJECT

- Conducted EDA on 20,765 Airbnb listings using Python (Pandas, NumPy, Matplotlib, Seaborn) to uncover price trends, availability, and host behavior
- Identified price outliers, neighborhood pricing trends, and room type distributions through statistical analysis and data visualizations (heatmaps, histograms, box plots)
- Provided data-driven recommendations for guests and hosts, improving pricing strategy and booking potential. Proposed future enhancements using machine learning for price prediction and sentiment analysis of reviews.

NETFLIX MOVIES & TV SHOWS

- **Content Analysis by Attributes:** Worked on SQL to analyze "Netflix Movies & TV Shows" using the Kaggle Dataset. Analyzed Netflix's content distribution by release years, countries, and durations to uncover trends and patterns.
- **Categorization and Insights:** Categorized content based on specific criteria and keywords to understand its nature and target audience.
- **Key Metrics and Insights:** Identified the most common content ratings, top-producing countries, and the balance between movies and TV shows.

WALMART SALES DATA ANALYSIS

- Performed **SQL-based exploratory data analysis (EDA)** on Walmart sales data across multiple branches to identify revenue drivers, sales trends, and customer behavior.
- Developed **feature engineering techniques** (time of day, day of the week, month) to analyze seasonal sales patterns and optimize business strategies.
- Provided **data-driven insights** on product performance, customer segmentation, and tax contributions, enabling data-informed decision-making for revenue optimization.

SKILLS

Technical Skills: C & C++ | Java | Python | R | SAPBW | MS Office | OCAML

SQL: MySQL | PostgreSQL | NoSQL

AI/ML Libraries: PyTorch | Tensorflow | Scikit Learn | NumPy | Pandas

Cloud & Data Visualization: Snowflake | SAP Analytics Cloud | PowerBI | CloudLab | Matplotlib | Plotly | Seaborn

CERTIFICATIONS

Snowflake: Data Sharing, Data Warehouse, Data Engineering, Data Applications	Feb 2023
AZ 900: Microsoft Azure Fundamentals	Jun 2023
Infosys Certified SAP Business Warehouse Professional Consultant	Jul 2023
P&G certified SAP ABAP developer	Aug 2023
Udemy Mastering Generative AI-Beginner Guide	Feb 2025

INTERESTS

Astronomy, Spectroscopic Data Analysis (Star study), Movies (Sci-Fi), Reading (Philosophy, Sci-Fi), Space Photography, 3D Art