GAYATRI SIVANI SUSARLA

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SUMMARY

Aspiring Data Scientist currently pursuing a Master's, 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

- Monitored and optimized global ETL processes for client company P&G, ensuring efficient data load operations, server health, and error resolution across multiple time zones using SAP BW Workbench, enhancing data pipeline reliability.
- Collaborated in managing large-scale data ecosystems, leveraging expertise in SAP BW, Snowflake, and Azure Fundamentals
- Gained hands-on experience in data integration and analysis by applying data visualization using SAP Analytics Cloud

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

- Conducted comprehensive performance analysis, demonstrating the algorithm's adaptability to real-world data distributions, achieving a time complexity of $O(\sqrt{N})$
- Developed and implemented the Adaptive Grover Algorithm, optimizing quantum search operations for weighted datasets
- 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

- Utilized machine learning algorithms to predict outcomes in the NCAA March Madness basketball tournament
- Conducted comprehensive data analysis and feature engineering to improve model accuracy and performance
- Worked collaboratively in a team to develop, test, and validate predictive models, participating in a Kaggle competition

R PACKAGE | Prof. Pei Fen Kuan | AMS Jan 2024 – Apr 2024

- Created 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 | SAPBI | Git | MS Office

SQL: MySQL | PostgreSQL | NoSQL

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

Data Visualization: SAP Analytics Cloud | PowerBI | Matplotlib | Plotly | Seaborn

CERTIFICATIONS

Snowflake: Data Sharing, Data Warehouse, Data Engineering, Data Applications	Feb 2023
Microsoft Azure Fundamentals	Jun 2023
Infosys Certified SAP Analytics Cloud 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