THANUSRI AENUGULA

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Education

Texas A&M University, College Station, Texas **Aug 2025 - Dec 2026**
Master of Science in Data Science
Courses: Data Mining, Statistics, Mathematics for ML, Machine Learning, Deep Learning, Reinforcement Learning

Sri Sivasubramaniya Nadar College of Engineering, India **July 2021 - June 2025**
Bachelor of Engineering in Electrical and Electronics Engineering *CGPA: **8.72/10***
Courses: Data Structures, Probability and Statistics, Introduction to Data Science, Machine Learning, Artificial Intelligence

The University of Texas at Austin – McCombs School of Business (Remote) **Aug 2023 - Aug 2024**
Post Graduate Program in Data Science and Business Analytics – Professional Certification *CGPA: **3.75/4***
Courses: SQL, Predictive Modeling, Data Visualization, Time Series Forecasting, Marketing and Retail Analytics, Financial and Risk Analytics

Technical Skills

Languages	Python, C++, SQL, HTML, CSS, JavaScript
Tools	PowerBI, Tableau, VSCode, Azure DataBricks, Azure Machine Learning
Libraries	TensorFlow, Pandas, Numpy, PyTorch, PySpark, Hugging Face
Soft Skills	Time Management, Leadership, Team Work, Problem Solving, Analytical Thinking

Experience

Daimler India Commercial Vehicles (BharatBenz) | ***Research & Development Intern*** **Jan 2025 - Jun 2025**
Worked on two projects with the Data Driven Engineering team that built machine learning models and enabled Daimler test the vehicles on dynamic brake testing.

- Developed a statistical twin for dynamic brake testing systems using historical brake performance data and machine learning models.
- Achieved an R^2 value of **0.94** for Mean Fully Developed Deceleration and **0.93** for Stopping Distance prediction.
- Enabled the functional testing team to optimize and pre-screen vehicle performance, reducing testing time by **80%**.
- Analyzed telematics and Dealer Management Service (DMS) data to develop pipelines for real–time monitoring, enhancing the driving patterns analysis, and fleet optimization using Azure Databricks.

Shrimitha Energy Solutions Private Limited | ***Data Science Intern*** **Sept 2024 - Nov 2024**

- Developed hybrid models to predict the Remaining Useful Life and State of Charge of batteries and achieved an R^2 value of **0.97** using **CNN-LSTM-XGB** model.
- Analyzed over 38+ batteries, reducing failure prediction time by **25%**, enhancing operational decision making.

Research and Projects

Predictive Maintenance of Wind Turbine Systems using AI — Research Project [GitHub] **Aug 2024 - Apr 2025**

- Submitted a paper to the **Elsevier** Engineering Applications of AI journal that presented hybrid methods to predict the Remaining Useful Life of wind turbine systems.
- Designed an interactive PowerBI dashboard to effectively monitor and visualize data fluctuations and changes, facilitating informed decision making.
- Built different hybrid models to predict the Remaining Useful Life of the wind turbine systems out of which **CNN-LSTM-GRU** performed really well with a coefficient of determination of **0.91**

Behavioural Churn Modeling [GitHub] **Jul 2024 - Aug 2024**

- Increased churn prediction accuracy to **98%** using the **Gradient Boosting** model, enabled targeted retention strategies, and lessened churn by **15%**
- Improved precision of churn prediction, minimized false positives, and optimized spend on retentions.
- Validated model consistency with cross-validation and got less than 10% difference between training and testing metrics.

Sales Analysis and Forecasting Behavioural Patterns [GitHub] **Mar 2024 – Apr 2024**

- Analyzed wine sales data through data cleaning, visualization techniques, and time series decomposition, and improved forecasting accuracy by **20%**.
- Undertook a comparative analysis of 7 forecasting techniques; **Triple Exponential Smoothing** performed best with a lower RMSE value of 317.43.

Honors and Extra Curriculars

- Secured first position in the **regional-level** singing competition and represented at the **national-level**.
- Led the SSN Music Club to a **second-place** finish in the inter-college singing competition as the **vocal team lead**.
- Served as **Event Analytics Head** for Invente, the annual technical fest at SSN College.