SRILEKHA TIRUMALA VINJAMOORI

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EDUCATION

The University of Texas at Arlington Aug 2023 – May 2025
MS in Information Systems, Graduate Certificate in Business Analytics GPA: 4.0

- **Coursework:** Data Mining, Data Visualization, AI Ethics, Explainability and Interpretability, Business Process Improvement, System Analysis and Design, Database Management and Optimization, Project Management, Cloud Computing

SRM Institute of Science and Technology Jun 2016 – May 2020
BTech in Electronics and Communication Engineering GPA: 3.5

PROFESSIONAL EXPERIENCE

Graduate Teaching Assistant, University of Texas at Arlington – Arlington, TX Jan 2024 – May 2025

- Designed SQL-based assignments to teach data analysis, helping 100+ students extract business insights using visualizations and dashboards in Power BI and Tableau.
- Mentored over 100 students on SQL, Tableau, and business analytics concepts, reinforcing data storytelling and communication.

Digital and Systems Analyst, Shree Venkateshwara Foams LLP – Hyderabad, India Oct 2022 – May 2023

- Built Power BI dashboards to track sales, inventory, and customer segmentation, improving decision turnaround by 20%.
- Coordinated end-to-end analytics projects with cross-functional teams to monitor supply chain KPIs and drive improvements in routing, warehousing, and fulfillment workflows, reducing stock discrepancies by 25% through automated inventory tracking.
- Developed and optimized digital marketing campaigns using social media,leading to a 15% increase in customer engagement and a 10% rise in lead conversions.

Analyst, Wipro Limited – Hyderabad, India Sept 2020 – Aug 2022

- Validated 40+ servers post data center migration using Proton, executing tests, capturing logs, and ensuring operational readiness through quantitative analysis.
- Extracted faulty test cases and identified root-cause defects by analyzing over 2,000 test cases across 40 servers, cleaning test data, and creating actionable reports to support QA and system improvement efforts.
- Operated ServiceNow to manage approximately 3 escalated incidents and over 50 change requests per month, along with task workflows, maintaining SLA compliance and streamlining service delivery.

PROJECTS

AutoNexus - Automated Machine Learning ↗ March 2025 - Present

- Architected AutoNexus, a Streamlit application streamlining data preprocessing, modeling, and interpretability for classification, regression, and clustering, enhancing analytical capabilities by 40% and reducing manual errors.
- Integrated SHAP, LIME, and EBM into the workflow, improving model transparency and enabling analysts to extract actionable insights 30% faster with minimal code and higher stakeholder interpretability.

Loan Default Prediction - Interpretability and Explainability April 2025

- Built an end-to-end loan default prediction model using Random Forest and SMOTE, addressing class imbalance and ensuring model robustness on financial risk data.
- Implemented model interpretability using SHAP, LIME, and DiCE-ML to generate global insights, local explanations, and counterfactual examples for actionable decisions.
- Conducted fairness analysis with Fairlearn and AIF360, evaluating metrics like demographic parity and equalized odds across protected features (e.g., income, location).
- Created ALE and PDP visualizations to quantify nonlinear feature influence, supporting transparent model reporting and ethical compliance for stakeholder review.

Fraud Detection in Job Postings Dec 2024

- Built and optimized fraud detection models using **Exact Bayes** and **Bernoulli Naive Bayes**, achieving 96.45% accuracy through advanced probabilistic modeling.
- **Reduced false positives** by 87.5% through precision tuning and threshold-based classification, improving fraud detection reliability.
- Engineered key features from text and categorical data, applying vectorization **(CountVectorizer)**, categorical encoding, and salary transformation, enhancing model interpretability. data preprocessing techniques, handling missing values, resampling for class imbalance **(SMOTE)**, and numerical transformations for improved model generalization.
- Evaluated model performance using **precision-recall curves, F1-score optimization, and cross-validation**, ensuring robust fraud detection with minimal bias.

Advocate Diary Management & Performance Analytics Dashboard July 2024

- Built a **Power BI** dashboard by extracting advocate case data from Microsoft SQL Server, enabling real-time tracking of case outcomes and advocate performance.
- Optimized data visualization and reporting, enhancing efficiency in monitoring advocate activity and improving legal case management.

Universal Furniture Outlet – Database Design and Optimization Dec 2023

- Developed a third-normal form **Oracle database** to streamline customer orders, delivery logistics, and inventory management.
- Optimized SQL queries and indexing strategies, improving database performance by 25% and reducing query execution time.
- Designed **Tableau** dashboards for real-time tracking of order fulfillment and inventory trends, enhancing decision-making and reducing stock shortages.

Wines Sales Prediction   Dec 2023

- Predicted wine sales volume using Random Forest Regressor and XGBoost; applied RandomizedSearchCV to fine-tune models, improving R^2 performance.
- Used SHAP TreeExplainer for model interpretability, revealing key features that influenced purchasing behavior.

TECHNICAL SKILLS

Programming & Data Handling: Python, R, SQL

ML Frameworks & Libraries: SMOTE, SHAP, LIME, EBM, Alibi, Dice-ML, InterpretML, AIF360, Fairlearn, Streamlit

Data Processing: Feature Engineering, Data Cleaning, Categorical Encoding, Scaling, Normalization, PCA, Hyperparameter Tuning

Data Visualization & Reporting: Tableau, Power BI, Excel

Database & Systems: Oracle, MySQL, SQL Server, Microsoft Access, Data Warehousing, ETL Pipelines, ER Modeling, Normalization

Statistical Analysis: Hypothesis Testing (Z-Test, T-Test), Statistical Significance, Central Limit Theorem, Correlation Analysis, Confidence Intervals

Cloud & Enterprise Tools: AWS (S3, EC2, Lambda), SAP (Order Management, Analytics), Git, GitHub

Project & Stakeholder Management: Agile Workflow, Team Collaboration, Teaching & Mentoring

CERTIFICATIONS

Google Data Analytics Certification

AWS Solutions Architect Associate (In Progress)