

SREELAKSHMI VELLANKI

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Education

University of Houston

Master of Science in Engineering Data Science

Aug. 2024 – May 2026

CGPA: 3.95/4.0

MLR Institute of Technology

Bachelor of Technology in Computer Science

Dec. 2020 – May 2024

CGPA: 3.7/4.0

Experience

Instructional Assistant

Apr. 2025 – Present

C. T. Bauer College of Business, University of Houston

Houston, TX

- Developed AI/ML case studies demonstrating predictive workforce analytics, integrating data exploration, hypothesis testing, and feature engineering to optimize HR decision-making.
- Collected, cleaned, and transformed 4K+ unstructured CEO shareholder letters using Python (Pandas, SpaCy, TF-IDF) for sentiment behavioral analysis with SVM and Logistic Regression models, achieving 85% classification accuracy.

Data and Quality Analyst Intern

Jan. 2024 – Jun. 2024

TEZO Digital

Hyderabad, India

- Built and optimized ETL workflows using Python, SQL, and Power Query to ingest, clean, and transform 10K+ QA log records from multiple data sources, improving defect tracking efficiency by 22%.
- Designed automated CI/CD deployment pipelines in Azure DevOps for data validation and testing, reducing manual release time by 30% and ensuring consistent data integrity.
- Created and maintained SQL-based data extraction scripts to generate test datasets for analytics dashboards and reporting.
- Developed 4+ interactive Power BI dashboards for monitoring defect trends, data completeness, and system health, enabling faster decision-making by QA and DevOps teams.

Teaching Assistant

Dec. 2021 – Apr. 2024

CIE – MLRIT

Hyderabad, India

- Mentored 120+ students in Python-based ML, NLP, and data analysis projects, boosting technical project success by 40%.
- Facilitated 20+ hands-on lab sessions on supervised learning, deep learning, and real-world data pipelines.
- Organized and led workshops and hackathons focused on applied AI/ML, increasing student engagement by 35%.

Projects

SLA-CARA: Smart Legal Contract Analyzer | LLaMA 3.2, Legal-BERT, FAISS, SpaCy, HuggingFace

- Designed and deployed an end-to-end ML pipeline for clause classification and summarization using Legal-BERT embeddings, LLaMA prompting, and FAISS retrieval, processing 13K+ contract clauses.
- Applied evaluation metrics (Recall@5, ROUGE, BLEU) to validate retrieval and summarization performance, improving relevance by 24%.

Global Health Expenditure Analysis Using Power BI | PowerBI, DAX, Python, Clustering

- Built an interactive Power BI dashboard to visualize health spending across 100+ countries, enabling region-wise insights and trend tracking over 10+ years.
- Implemented data clustering (K-Means) to segment 100+ countries by healthcare efficiency, creating scalable pipelines to refresh insights dynamically.
- Processed 500K+ WHO records using Power Query and engineered KPIs with DAX to highlight private vs. government healthcare funding shifts.

San Francisco Building Permits Classification | Python, Scikit-Learn, XGBoost, LightGBM

- Achieved 98% accuracy in predicting permit approvals by implementing and tuning classification models including Random Forest, XGBoost, and LightGBM, improving prediction reliability.
- Boosted model relevance by applying Chi-Square statistical testing to select high-impact categorical features.
- Compared, evaluated, and optimized multiple algorithms (KNN, Logistic Regression, Naive Bayes) for generalizability on imbalanced datasets.

Technical Skills

Languages & Libraries: Python, SQL, Java, C, Pandas, NumPy, Scikit-learn, XGBoost, LightGBM

ML & AI: Regression, Classification, Clustering, Hyperparameter Tuning, Model Evaluation, Hypothesis Testing, A/B Testing, Neural Networks, CNNs, RNNs

NLP: NLTK, SpaCy, HuggingFace Transformers, BERT, LLaMA, Text Classification, NER, Summarization

Tools/Platforms: Power BI, Power Query, Excel, Seaborn, Matplotlib, SQL, Git, Jupyter, Azure DevOps, Linux, Shell Scripting, AWS, Object Oriented Programming