Maithili Saran Reddy Lingala

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EDUCATION

University of Illinois - Urbana Champaign   Aug 2023 - May 2025
Master of Science in Information Management   *GPA: 4.0/4.0*
- **Relevant Coursework:** ML Cloud, Data Warehousing & Business Intelligence, Data Science, Project Coordination.

SRM Institute of Science and Technology, India   Aug 2019 - May 2023
Bachelor of Technology in Computer Science & Engineering with Specialization in Big Data Analytics   *GPA: 9.2/10.0*
- **Relevant Coursework:** AI, ML, DSA, Database Management System, Statistics, Data Visualization, Data Storytelling.

TECHNICAL SKILLS

Programming & Libraries: SQL, R, Python (NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn), Databricks, Visual Studio IDE.
Databases & Querying: PostgreSQL, MySQL, DynamoDB, NoSQL, Star/Snowflake Schema, ETL (SSIS), Data Reporting.
Business Intelligence: Power BI (DAX, Power Query, M Code), Tableau, Power Point, AWS, Excel (Pivot Tables, VBA).

EXPERIENCE

Gies College of Business, University of Illinois - Urbana Champaign   Aug 2024 - Present
Research Assistant   *Champaign, Illinois*
- Re-engineered a traditional analytical process by developing a new, end-to-end machine learning framework, utilizing real-world datasets to build and validate models that translated mathematical theory into a more modern, automated business solution.
- Authored accessible presentations and interactive notebooks to guide non-technical stakeholders through the transition to the modernized framework, improving data literacy and driving the adoption of ML insights for business decisions.

Data Science Lab, SRM Institute of Science and Technology   Jan 2023 - May 2023
Research Assistant   *Chennai, India*
- Led end-to-end development of a cardiovascular disease prediction model using Python and scikit-learn, achieving a precision of 97% through data preprocessing and feature engineering on a 1,025-patient dataset.
- Optimized KNN and Random Forest algorithms through hyperparameter tuning, reducing false negatives by 15% and achieving 0.99 AUC-ROC, outperforming prior studies by 10-11% in precision/recall metrics.
- Published peer-reviewed research paper on ML-driven CVD prediction, detailing cross-validation workflows and model interpretability, cited in 3 conferences for advancing clinical decision-making.

Volksoft Technologies Pvt Ltd   Jan 2022 - Jun 2022
Data Analyst Intern   *Hyderabad, India*
- Performed data acquisition and pre-processing, implementing data quality checks to verify data accuracy and resolve inconsistencies in large datasets.
- Applied predictive models to identify customer behavior patterns, resulting in a 25% improvement in trend forecasting.
- Collaborated with cross-functional teams, performing advanced statistical and machine learning analysis to provide data-driven recommendations, optimizing business strategies and improving operational efficiency by 20%.
- Developed and automated interactive dashboards and performed recurring data reporting in Tableau, streamlining stakeholder communication for strategic decision-making.

PROJECTS

Employee Attrition Predictive Modeling | *Python, EDA, Scikit-learn, Tree-based Modeling*
- Developed Decision Tree & Random Forest models to predict employee turnover, obtaining 96% accuracy on an HR dataset of around 15K records after leveraging Feature Engineering and Hyperparameter Tuning.
- Engineered a binary "overworked" feature, uncovering that employees working 175+ hours/month or handling excessive projects had higher attrition risks, aiding data-driven HR decision-making.

Crime Pattern Analysis and Prediction | *Python, Scikit-learn, Tableau*
- Built a Predictive Crime Analysis model using Gaussian Naive Bayes on a dataset of over 7 million records, achieving a 30% boost in accuracy through Class Imbalance resolution, Label Encoding, and Feature Scaling.
- Designed a Tableau dashboard visualizing crime hotspots and patterns, reducing geospatial outliers by 68% and enabling stakeholders to identify high-risk areas for optimized resource allocation.

Customer Segmentation & Sales Trend Analysis | *SQL, PowerBI, Snowflake Schema*
- Architected Snowflake Schema data model integrating 15+ tables, developed 25+ DAX measures, and designed 4 executive dashboards that reduced decision latency through real-time KPI tracking of sales trends.
- Implemented demographic clustering revealing high-income ($100k+) buyers generated 2.3x higher AOV, enabling marketing teams to launch personalized campaigns that reduces product returns.