Rohith Reddy Kolanu

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Summary

Results-driven Data Science, Machine Learning, Artificial Intelligence and Analytics professional with 2+ years of industry experience, currently pursuing a Post Graduate Program in Artificial Intelligence & Machine Learning from The University of Texas at Austin. Strong foundation in Advanced ML, Neural Networks, NLP with Generative AI, Computer Vision, and Model Deployment, complemented by hands-on experience in Python, SQL, Power BI, and statistical analysis. Proven ability to translate complex data into actionable insights, automate reporting processes, and support data-driven decision-making by bridging business strategy with advanced analytical and AI-driven solutions.

Technical Skills

Programming Languages, Databases & Version Control: Python, R, SQL, PostgreSQL, MySQL, NoSQL, Git
Data Analysis, Visualization & Business Intelligence: Pandas, NumPy, SciPy, Matplotlib, Seaborn, Microsoft Excel, Microsoft Power BI, Tableau
Machine Learning & Artificial Intelligence: Scikit-learn, Regression, Classification, Clustering, Deep Learning, Neural Networks, Natural Language Processing (NLP)
Deep Learning, Generative AI & Advanced AI Frameworks: TensorFlow, Keras, PyTorch, Generative AI, Large Language Models (LLMs), Hugging Face Transformers, LangChain, Prompt Engineering, ChromaDB
Big Data, Cloud Platforms & Data Engineering: Apache Spark, Apache Kafka, Apache Airflow, Hadoop, ETL/ELT Pipelines, Snowflake, AWS
Model Deployment, MLOps & Development Tools: Docker, Flask, Google Colab, Jupyter Notebook, OpenCV, spaCy

Education

The University of Texas at Austin Austin, TX
Post Graduate Program in Artificial Intelligence and Machine Learning: Business Applications Dec 2025 - Aug 2026
Relevant Coursework: Python Foundations, Machine Learning, Advanced Machine Learning, Introduction to Neural Networks, Natural Language Processing with Generative AI, Introduction to Computer Vision, Model Deployment

University of Massachusetts Amherst Amherst, MA
Master of Science in Business Analytics, Data Analytics Aug 2024 - May 2026
Relevant Coursework: Data Management, Business Intelligence, Business Applications with Python, Machine Learning, Project Management, Financial Technology, Data Science, Data Visualization, Artificial Intelligence

Osmania University Hyderabad, India
Bachelor of Business Administration, Finance May 2019 - Jul 2022
Relevant Coursework: Economics, Organization Behavior, Statistics, Accounting, Marketing Research, Risk Analysis, Insurance Services, Business Law & Ethics, Management Science, Banking, Investment Analysis

Experience

Broadridge Hyderabad, India
Process Analyst Aug 2022 – Jul 2024

- Designed and automated an Excel-based utilization tracking system, reducing manual effort by 90%, standardizing calculations, and enabling accurate workforce analytics leveraged through monthly Power BI and PowerPoint reports.
- Built and delivered monthly performance dashboards using Power BI and Excel, improving reporting accuracy and visibility of key utilization metrics, trends, and KPIs to support data-driven operational decisions.
- Analyzed and processed over 2,000 client documents, websites, and HTML emails with 99% accuracy, ensuring SLA compliance while maintaining high data quality, validation standards, and process consistency.
- Handled 300+ operational requests during peak cycles with 99% accuracy, reducing turnaround time by 20% through workflow optimization, prioritization logic, and continuous process improvement initiatives.
- Collaborated cross-functionally with Desktop Publishing and Client-Facing teams to validate data outputs, improve reporting reliability, and translate operational data into actionable business insights.

Projects

Insights into Customer Shopping Behavior

- Project analyzes 3,900 retail transactions across 18 attributes including age, gender, product, price, payment, and frequency, enabling structured exploration of customer purchasing behavior using a clean, tabular dataset.
- Data pipeline integrates CSV ingestion, SQL querying, Python EDA, and Power BI visualization, transforming raw transaction-level data into aggregated KPIs such as average spend, purchase frequency, and category-level revenue.
- Quantitative analysis highlights purchase amounts, review ratings, prior purchase counts, and discount usage, allowing comparison across demographics, seasons, locations, and subscription versus non-subscription customers.
- Interactive Power BI dashboard presents trends by category, gender, and season, supporting business decisions through measurable outputs like transaction counts, average order value, and percentage use of promos or discounts.
- Overall, it demonstrates an end-to-end analytics workflow, combining multiple tools and KPIs to convert customer-level data into actionable retail insights for data-driven decision making and strategic business performance optimization.

Loan Default Risk Assessment Using Machine Learning

- Developed a machine learning-based loan default prediction solution using demographic, financial, and credit history features, focusing on minimizing false negatives and improving credit risk assessment through recall-driven model optimization.
- Conducted comprehensive exploratory data analysis including univariate, bivariate, correlation, and class imbalance analysis, identifying key relationships and outliers influencing loan default behavior and overall model performance.
- Built a robust preprocessing pipeline incorporating outlier treatment, feature scaling, categorical encoding, SMOTE-based class imbalance handling, and stratified train–test splitting to ensure reliable and unbiased model training.
- Trained and evaluated seven supervised classification models, with Decision Tree achieving the best performance at 89.21% accuracy and 0.895 F1-score, while SVM delivered strong results with 87.99% accuracy and 0.886 F1-score.
- Compared models using accuracy, precision, recall, F1-score, and ROC-AUC, demonstrating that tree-based and ensemble methods outperform linear models, enabling data-driven, risk-based lending and portfolio loss reduction strategies.

Predicting Used Car Prices Through a Machine Learning-Based Regression Model

- Developed a machine learning–based regression framework to predict used car prices, benchmarking multiple models and identifying XGBoost as the top performer with lowest Test RMSE of 0.162 and Test MAE of 0.128, demonstrating strong generalization capability.
- Conducted end-to-end exploratory data analysis and feature engineering on vehicle attributes such as age, mileage, engine capacity, fuel type, and ownership, uncovering key price drivers and reducing noise impacting regression model accuracy.
- Built and evaluated regression models including OLS Regression, Random Forest, and XGBoost, comparing performance using RMSE, MAE, and MAPE, and ranking models based on test metrics to ensure objective, data-driven selection.
- Achieved superior predictive accuracy with XGBoost, outperforming Random Forest (Test RMSE = 0.203) and OLS Regression (Test RMSE = 0.239), and ranking 1st across RMSE, MAE, and MAPE in overall model performance.
- Translated model outputs into actionable pricing insights, enabling data-driven valuation strategies, improved inventory pricing accuracy, and reduced estimation error through advanced ensemble methods and rigorous evaluation.

Certifications

Python for Data Science, AI & Development
AWS Cloud Practitioner Essentials
Microsoft Power BI - Beginner to Pro
Learning Excel Desktop (Microsoft 365)
Alteryx Bootcamp
Supply Chain Analytics Foundations
Six Sigma Foundations
Git Essential Training