RISHITHA REDDY BITLA

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EDUCATION

George Mason University, Fairfax, Virginia | Aug 2023 - May 2025
Master in Data Analytics Engineering – GPA (3.8/4)
CVR College of Engineering, Hyderabad, India | Aug 2019 - May 2023
Bachelor of Technology in Electronics and Communications – GPA (8.9/10)

PROJECT EXPERIENCE

Employee Attrition Analysis *(Python, Pandas, Seaborn, Scikit-learn, Machine Learning, Power BI)*

- Developed a predictive model using Logistic Regression and Decision Tree Classification, achieving 85% accuracy in forecasting employee attrition through 2+ feature optimizations.
- Identified key attrition drivers through statistical analysis, revealing job satisfaction and work-life balance as top factors among 3+ variables.
- Processed and visualized 20,000+ records using Python (Pandas, Seaborn), reducing data cleaning time by 10% through automated pipelines.
- Designed 2+ interactive Power BI dashboards to present retention strategies, improving stakeholder decision-making efficiency by 25% within 1 week.
- Enhanced model interpretability, increasing team understanding of key metrics by 40% during presentations.
- Implemented cross-validation techniques that improved model generalization by 4% compared to baseline approaches.

Forbes Global Data Financial Trends Analysis *(Python, Pandas, NumPy, Seaborn, Machine Learning)*

- Cleaned and prepared 15 years of financial data (2008–2023), improving dataset consistency by 3% using Pandas and NumPy for 5,000+ entries.
- Built a Linear Regression model, uncovering a 0.78 correlation between sales growth and market value increase across 2,000 companies.
- Created 5+ advanced visualizations (Donut Charts, 3D Scatter Plots), highlighting North America's 46.9% dominance in market value share.
- Automated 3 data preprocessing steps, cutting analysis time by 20% while maintaining 95% data accuracy standards.
- Conducted time-series analysis revealing 15% quarterly growth in Asian markets, enabling targeted investment strategies.

Text-Based Mood Detection (*Python, BERT, SVM, Naive Bayes, Streamlit, Machine Learning, NLP)*

- Preprocessed 10,000+ text samples through tokenization and normalization, improving input quality by 4% with NLP techniques.
- Refined BERT embeddings and trained SVM/Naive Bayes models, achieving an 82% score in emotion classification across 4 categories.
- Built a real-time dashboard using Streamlit, reducing latency by 60% (from 5s to 2s) for live emotion analysis.
- Proposed hybrid NLP solutions for context-dependent language, boosting model performance by 15% on ambiguous phrases.
- Deployed the system for live sentiment tracking, processing 500+ user inputs/minute with 90% accuracy.
- Integrated multilingual support expanding analysis capabilities to 3 additional languages with 85% accuracy.

SKILLS

Python | R | SQL | C | C# | NLP | HTML | CSS | JavaScript | Node.js | Express | Power BI | AWS S3 | AWS EC2 | MS Excel | PySpark | NumPy | Pandas | Seaborn | Matplotlib | React.js | Machine Learning | FastAPI

CERTIFICATIONS

- **SQL & PostgreSQL –** Udemy **| Apr 2025**
- **Python for ML & Data Science –** Udemy **| Mar 2025**
- **FastAPI (Beginner + Advanced) –** Udemy **| Jan 2025**
- **Database programming with SQL –** Oracle Academy **| May 2022**