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Vishwanath Guruvayur
Data Scientist

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EDUCATION

University of Virginia   Charlottesville, VA
Master of Science in Data Science   Jun 2024 – May 2025

Capstone Project (sponsored by LMI Inc.): Implementing Multimodal RAG-based LLM for Education
Research on methods for including multimodal data to build an Agentic AI-enhanced, context-rich learning experience.
Coursework: Large Language Models • Big Data Systems • Statistical Machine Learning • Deep Learning • Data Structures and Algorithms • Data Engineering • NLP and Text Analytics • Bayesian Machine Learning • Data Ethics
Activities: Data Science Ambassador • TA - Statistical Machine Learning • Academic Village Resident (The Range)

Birla Institute of Technology and Science (BITS Pilani)   Hyderabad, India
Bachelor of Engineering in Mechanical Engineering, Minor in Data Science   Aug 2018 – Dec 2021

PROFESSIONAL EXPERIENCE

Lead Data Scientist   Bethlehem, PA (Remote, India)
Piramal Critical Care   Jan 2022 – Jun 2024

- **Established and led the Data Science and Analytics Team**, mentoring a high-performing team of data scientists to integrate advanced analytics with best practices into core business functions.
- **Collaborated closely with senior leadership** to translate business challenges into data-driven strategies, improving strategic decision-making and boosting operational efficiency.
- Engineered **over 30 Data and ML pipelines** with Python and SQL for critical analytical reports, reducing manual workload by 85% and enabling real-time insights **for faster, more accurate actionable insights.**
- Introduced **Predictive Modeling** for streamlining financial planning, market analysis, and supply chain operations, **driving a 40% efficiency gain** in processes and enhancing visibility into inefficiencies and optimization opportunities.

Key Project Highlights:

- **Inventory Forecasting**: Prevented **$1.2M in quarterly inventory** losses by increasing depleting stock visibility and optimizing replenishment cycles using an S-ARIMA and Monte Carlo simulation-based time-series forecasting pipeline.
- **Market Share and Growth Analytics**: Created an executive dashboard employing competitive benchmarking and segmentation analysis, identifying growth opportunities, **influencing long-term strategic planning at the C-suite level.**
- **Individual Development Plans**: Designed an NLP sentiment analysis model using VADER and TextBlob to analyze performance reviews, identifying key improvement areas and **informing HR leadership's talent development strategies.**

Data Science Intern   Mumbai, India
Piramal Consumer Healthcare   Jul 2021 – Dec 2021

- Worked with cross-functional teams to provide analytical solutions for sales optimization and employee retention.
- **Recognized for exceptional performance**, leading to an offer for a Lead role at Piramal Critical Care.

Key Project Highlights:

- **Product Recommendation Engine**: Developed the company's first recommendation engine pipeline from scratch based on the FP-Growth algorithm, achieving **15% increase** in market penetration quarterly across **400k retailers**.
- **Salesmen Attrition Prediction**: Built an ensemble model utilizing **XGBoost and Logistic Regression** to predict salesmen attrition by leveraging performance metrics and operational features, achieving a **93% critical retention rate**.

SKILLS

Programming Languages: Python, R, SQL, JavaScript, C++, MATLAB, Scala, Julia
AI and ML: Traditional ML, NLP, Deep Learning (PyTorch, TensorFlow), LLMs (LangChain, HuggingFace), OpenCV
Cloud Data Tools: Azure (DataBricks, Data Factory, ML Studio), AWS (SageMaker, Dask, EC2), Git, Docker, PySpark
Data Visualization: Power BI, Plotly Dash, MS Excel (VBA, Power Query), d3.js, QlikSense