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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 in including multimodal data to develop an Agentic AI-enhanced, context-rich learning experience.

Coursework: Statistical Machine Learning • Large Language Models • Deep Learning • NLP and Text Analytics • Big Data Systems • Bayesian Machine Learning • Applied Data Engineering • Data Structures and Algorithms • 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 Team**, integrating analytics into business functions to empower data-driven strategies and enhance decision-making in tackling critical business challenges.
- Engineered automated Data and ML pipelines using Python and SQL, streamlining **over 30** analytics reports and improving reporting efficiency by **85%** with intelligent validation alerts.
- Introduced **Predictive Modeling** to generate actionable insights, driving market share growth strategies, enhancing financial decision-making and optimizing supply chain planning, leading to significant operational improvements.

Project Highlights:

- **Inventory Forecasting**: Built a time-series forecasting pipeline using **S-ARIMA** and **Monte Carlo simulations**, reducing quarterly write-offs by **$1.2M** and improving stock management, leading to a **40% boost** in supply chain efficiency.
- **Market Share and Growth Analytics**: Engineered an analytics dashboard using **segmentation analysis** and **competitive benchmarking** to evaluate market dynamics and identify growth opportunities, guiding long-term business strategies.
- **Individual Development Plans**: Designed an NLP sentiment analysis workflow using **VADER** and **TextBlob** to analyze employees' performance reviews, identifying key areas of improvement and informing personalized development plans.

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

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

Project Highlights:

- **Product Recommendation Engine**: Developed company's first recommendation engine from scratch using FP-Growth algorithm to optimize product placement, enhancing market penetration by **15%** quarterly across **400k retailers**.
- **Salesmen Attrition Prediction**: Built an ensemble model using **XGBoost and Logistic Regression** to predict salesmen attrition by leveraging performance metrics and key 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

CERTIFICATIONS

- AWS Certified Solutions Architect – Associate — Amazon Web Services (expected Mar 2025)
- AWS Certified Machine Learning – Associate — Amazon Web Services (expected Apr 2025)