RAJESH GIRI

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PROFESSIONAL EXPERIENCE

Senior Data Scientist – Generative AI   *Feb'24 - Present*
Fractal Analytics   *Redwood City, California*
- Developed an agent for question answering over structured databases on natural language queries, enabling intricate mathematical and logical operations. The agent is being utilized by **15+ customer pilot teams**
- Led a successful customer pilot by developing a **multi-modal RAG-based** solution to **automate metadata tagging** and enhance user searchability and interaction for **3000 videos**
- Deployed a comprehensive set of **guardrails** to detect and prevent hateful/harmful content, prompt injection, and leakage of sensitive information (PII) in generative models, achieving an **F1 score of over 90%**

Data Scientist   *May'22 – Dec'23*
Tiger Analytics   *Cincinnati, Ohio*
- Implemented a **Probability of Default** model deploying **Logistic Regression** and **ARIMAX** forecasting. Attained over 90% recall in predicting charge-off probabilities for credit card users, enhancing loss forecasting
- Spearheaded the building and deployment of a **Flask** application to **automate validation of PDF letters** for student loans business, decreasing turnaround time by more than **90%** and boosting accuracy by over **25%**
- Designed an end-to-end **PyTorch Natural Language Processing** library for **text classification** to finetune **Hugging Face Transformer models,** reducing development time by **~90%**
- Employed **PySpark** in **Databricks** to profile active credit card customers, performed segment-specific lifecycle analysis. This facilitated targeted value propositions, contributing to a projected ~**18% surge in customer spending**

Deputy Manager – Data Science   *Nov'18 – Aug'21*
Aditya Birla Capital   *Mumbai, India*
- Innovated a chat-based **NLP lead generation engine** to predict conversion likelihood by classifying intents and identifying keywords from daily customer chats. This led to **a 3x** increase in daily leads and **6x** increase in new business
- Engineered a robust **churn prediction model** in **AWS SageMaker**, which identified key risk factors affecting customer retention; this initiative resulted in a **40% increase in customer retention**.
- **Boosted user conversion rate by ~12%** by analyzing customer funnel for retail customers, identifying drop-off points to optimize user journey
- Orchestrated **A/B testing** experiments to elevate web traffic performance, leading to **12% lift** in key KPIs and **$11 Mn increase in annual SIP sales**
- Established monthly cadence of **mutual fund industry analysis** in **Power BI** to track competition funds, walking top management through key insights to facilitate strategic decision making

Risk Analyst   *Jun'16 – Nov'18*
Edelweiss Financial Services   *Mumbai, India*
- Devised a robust **credit scoring model** based on **LGBM Classifier** to forecast credit defaults for unsecured lending business, potentially increasing profits by **~40%**
- Engineered a **Stress Testing** Tool in **Python** employing **Monte Carlo Simulation** to gauge portfolio risk during extreme market scenarios, resulting in **~70% time savings** for devising informed risk mitigation strategies
- Analyzed portfolio risk metrics, automated risk reporting process using **Python**, reduced turnaround time by **~40%**
- Crafted weekly reports in **Tableau** capturing vital risk KPIs contributing to **reduction in risk breaches by ~20%**

SKILLS

- **Machine Learning:** Regression, Classification, Forecasting, NLP, Deep Learning, Generative AI, A/B testing
- **Tools and Programming**: Python, C++, SQL, Spark-SQL, Tableau, Power BI, MS Excel, VBA Macros, Flask, Git
- **Libraries and Packages**: Pandas, NumPy, PySpark, Scikit-learn, Seaborn, Matplotlib, PyTorch, Spacy, NLTK
- **Cloud Environments**: AWS, Snowflake, Dataiku, Google Data Studio, Databricks

EDUCATION

University of Cincinnati, Carl H. Lindner College of Business
Master of Science, Business Analytics (STEM) | Aug'21- Aug'22 | Cincinnati, Ohio

Pune University
Bachelor in Electronics & Telecommunications Engineering | Jul'12 - Jun'16 | Pune, India