Srila Maiti

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https://github.com/srilamaiti/srila_portfolio

Professional Summary

I do what I love and love what I do. I have worked extensively in data analytics space for last 19 years and focus on data science area for last 4 years with various clients across the USA, Canada India, and South Africa in multiple domains including retail, banking, manufacturing, and publishing. I love translating complex business asks in smaller chunks and build high impact data-driven solutions using data science and data analytics to derive actionable insights and presenting the findings to business stakeholders. I collaborate with business users and stakeholders to make data driven strategies to implement short term quick wins and long-term strategic vision. I work at the intersection of business analysis, strategy, data engineering and data science and analytical solutions. This allows me to drive business objectives using technology.

Education

University of California, Berkeley – Master of Information and Data Science

University of Kalyani, India – Bachelor of Technology – Information Technology

Skills and Tools

- Statistical Analysis, Computer Vision, Video Analytics, Research Design, Supervised, Unsupervised, Zero-shot, few-shot and Semi-supervised Machine Learning Algorithms, Natural Language Processing and Understanding (NLP/NLU), Dimensionality Reduction, Anomaly Detection, Change Point Detection, Neural Network, Experimentations, Data Mining
- Snowflake, Oracle, Teradata, Neo4J, MongoDB, Redis
- Hadoop, Hive, Pig, Spark, Impala
- Azure, GCP, AWS, Databricks, Jupyter Notebook
- Tableau, Power BI
- Python, R, SQL, BASH

Experiences

Stanley Black & Decker **Charlotte, NC**

Manager Data Analytics & Data Science June, 2023 – Till Date

- Anayzed buid vs build and build vs buy strategy.
- Analyzed transportation cost, labor analysis to derive optimized supply chain strategy.
- Analyzed key features in network analysis.

Technology: Python, SQL, Snowflake, PySpark

Albertsons Companies **Toronto, ON**

Data Scientist May 2022 – May 2023

- Predicted regular store-item-week level time-series demand for warehouse-sourced items using Random Forest, XGBoost, LightGBM, fbProphet, Sarimax, and rolling average and achieved 80% accuracy.
- Allocated warehouse-sourced constrained products at store level intelligently to reduce out-of-stock using optimization techniques including Pulp.
- Applied store-item level change point detection using Rupture to help the demand planners to signal any abrupt changes and anomaly detection.
- Identified item segments (high vs low velocity items, high vs low Coefficient of variation items) using clustering techniques like k-means clustering.
- Built a neural network based logistic regression model to predict if the item will be out of stock or not.
- Performed statistical analysis on timeseries data, trend analysis, seasonality analysis, peak detection, stationary analysis using statsmodel.
- Performed substitution item suggestion based on item description and similarity score using NLP techniques.
- Performed employee sentiment analysis based on employee survey data using SBert.

Technology: Random Forest, XGBoost, LightGBM, fbProphet, Sarimax, Optimization Model Pulp, CPD model Rupture, k-means clustering, Tensorflow, Logistic Regression, Statsmodel, numpy, scipy, pandas, SBert, Python, SQL, Snowflake, Databricks

Kraft Heinz **Toronto, ON**

Data Scientist September 2019 – May 2022

- Performed statistical analysis on the machine performance data to identify filling patterns, anomalies.
- Built an ML-based predictive maintenance classification model at the plant identifying if a particular machine/production line needs a scheduled preventive conditional maintenance to reduce overfill and overall supply chain losses using neural network-based time series techniques.
- Built demand forecasting and consumption forecasting solutions models at division-SKU level using ensemble ML models (decision tree, random forest, XGBoost, LightGBM). The process provided forecast accuracy improvement by 5-10% in selected categories.
- Built price-elasticity model to help the finance department to plan for appropriate promotions.
- Built model to identify item similarity based on the item description to map vendor provided item description to master data efficiently using NLP techniques
- Performed store-similarity analysis based on time-series data for price optimization.
- Architected and built end-to-end data solution of Kraft Canada retail portfolio and unified dimension hierarchy (master data) for the customer, product, and calendar to facilitate retail sales reporting using initially PySpark (for on-premises solution) and later Azure Data Factory, dbT, and Snowflake (cloud platform).

Technology: Random Forest, XGBoost, LightGBM, Catboost, Elasticnet, Tensorflow, Logistic Regression, Elasticnet, Python, numpy, scipy, pandas, Statsmodel, NLTK, spacy, Hive, pySpark, Snowflake, Databricks, dbt, Azure, SQL

Bank of Nova Scotia **Toronto, ON**

Senior Data Engineer October, 2018 – September, 2019

- Built data pipeline for Scotiabank campaign management using Python, PySpark, and Hive.
- Identified potential customers who were receiving childcare benefits from the government and did not have education saving accounts with the bank. This process increased a lead of 10% potential customers to send promotional offers.

Technology: Python, Logistic Regression, numpy, scipy, pandas, Hive, pySpark, SQL

Independent Consultant (various clients) **Toronto, ON**

Senior Data Analyst April, 2016 – September, 2018

- Led data analytics projects for clients including Bank of Montreal (BMO), Scotia Bank, CIBC and Points International using Python, Hive, SQL, Machine Learning and Unix
- Built domain demographic structure using Python and identified common keywords associated with the applications to help customers to find the right data source using data science techniques.

Technology: Python, numpy, scipy, pandas, Big Data, Hive, pySpark, SQL, Unix, Tableau, NLP, Machine Learning, Unix

Tata Consultancy Services (various clients) **India, United States, Canada, South Africa**

Data Integration Lead March, 2004 – March, 2016

- Led data integration projects for clients including The Home Depot, SuperValu, Eaton Electrical, Cummins, McGraw-Hill Education, Experian, and the University of the Witwatersrand.
- Implemented performance tuning solution to handle large datasets (Saved 500K USD thru performance tuning in Home Depot).
- Used exploratory data analysis, descriptive statistics data visualization and data science techniques to identify sales patterns.
- Redesigned and implemented a better inventory aggregation recasting process at Home Depot. This new process was able to handle much larger master data changes and reload hierarchical aggregates in a day with a built-in restart ability logic and removed the manual intervention as present in the old process.
- Tuned a long-running ETL application at the University of the Witwatersrand, resulting in a decrease in processing time from 30 minutes to less than one minute.
- Analyzed query plans and tuned the performance of a long-running query to bring archived invoice information at Mc- Graw-Hill Education. The use of query hints helped to get the data in the UI in less than 3 seconds.

Technology: Python, Big Data, Hive, pySpark, SQL, Unix, Tableau, Unix