## Uday kumar Gajavalli

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### **Objective:**

A passionate Data Scientist having around 5+ years of experience in Machine learning, Deep learning, Time series, Predictive modelling, Price elasticity models and Promotion analysis to solve complex business problems. Very strong knowledge in python various Machine learning and Deep learning techniques.

## **Professional Summary:**

- Proficient at design and development of supervised, unsupervised machine learning and deep learning based products.
- Proven track record in problem solving, use case formulation, data gathering, exploratory data analysis, pre- processing, model development, deployment, data storytelling and innovation.
- Experienced in Machine Learning (ML), Time series, Pricing, Promotion Analysis, Deep Learning (DL) and Natural Language Processing (NLP) applications.
- Conducting statistical analysis and modelling to identify trends and patterns in data and providing actionable insights to the management team.
- Expertise in manipulating and analyzing complex, high-volume, high-dimensionality data from varying data sources.
- Good understanding about Retail, CPG and Banking domains in various departments such as Authorizations, Inventory and Delivery.
- Experience in Tracking ML experiments to record and compare model parameters, evaluate performance through mlfow.
- Experience in ML/AI models using scikit-learn libraries. This includes NumPy, SciPy, Matplotlib and histogram.
- Proficient in using multiple IDE'S and software development such as VsCode, Jupyter notebook and Azure Data bricks.
- Worked on databases like SQL/MySQL and Big Query.
- Experienced in version control systems using GIT, GITHUB and issue tracking tool like Jira.

### **Technical Skills:**

Languages	Python, SQL, Big Query, Pyspark
Packages	Pandas, Numpy, Matplotlib, Tensorflow, Keras, Scikit-learn, mlflow
Machine learning	Linear/Logistic Regression, Decision Tree, Random Forest, KNN, SVM, Naïve Bayes, Ensemble Techniques, Markdown Optimization,

	XG-Boost, Market Basket Analysis, Time Series Forecasting.
NLP	NLTK, Topic Modelling and Text Summarization and Classification
Deep Learning	ANN and LSTM
Statistics	Inferential & Descriptive Statistics, Hypothesis Testing, T-test, Chisquare, ANOVA.
Tools and IDE	MSOffice, Jira, Confluence, Azure Data bricks, Jupyter notebook, Vscode

## **Professional Experience:**

- Currently Working as Associate Decision Science in Linkedin, Banglore from Oct 2023.
- Worked as a Data Scientist in Tredence Analytics Private limited, Banglore from May 2021 to Oct 2023.
- Worked as a Data Scientist in Atos Syntel, Chennai from June 2018 to May 2021.

## **Project 1: Retail Intelligence - Wallet Share**

**Business Objective:** Building an ML model which maps relationship between wallet share of customers and their demographics.

**Tools and Technology:** Python, Pyspark, Big query, Regression, Hypothesis Testing, Machine learning.

### **Responsibilities:**

- Understanding business objectives and developed machine learning models that helped to achieve those objectives.
- Involved in data cleaning, pre-processing of data, feature engineering and training models to make predictions, Model Evaluation & End to End Deployment Process.
- Worked with large data on BigQuery and created data ingestion pipeline.
- Deriving EDA which will be useful in gaining insights in terms of relationship between customer wallet share and demographics.
- Performed outlier adjustment and statistical analysis for feature selection, data sampling.
- Experimented with multiple Regression models and scoring with the best model on Population.
- Decile & Profiling the customers based on predicted wallet share.

# **Project 2: Demand and P&L Forecasting**

**Business Objective:** Implementing a Forecasting tool that helps business to make better strategic decisions towards Inventory Management, Revenue Planning and Resource allocation by providing insights into future demand, profit and loss trends.

**Tools and Technology:** Python, SQL, RStudio, Azure Data bricks, Azure Blob Storage, Jupyter Notebook, Univariate and Multivariate Time series models.

### **Responsibilities:**

- Interacted directly with the stakeholders to understand about the business, data and existing model architecture.
- Accuracy reporting by analyzing the historical data and derived insights on deviation.
- Developed new features from the data and performed feature selection based on VIF.
- Improved the performance by Implementing Outlier detection and treatment module to the model using Zscore, IQR methods.
- Created forecasting pipeline for generating monthly forecasts with an accuracy about 85% for all the components of volume and P&L at country level.
- Custom ensemble of regression model and time series model by incorporating macroeconomic, COVID, and industry indicators to accurately forecast trends and seasonality according to changing macroeconomic situations.
- Responsible for developing and Maintaing data bricks pipelines for data transformation and modeling.

## **Project 3: Promotion Analysis and Price Optimization**

**Business Objective:** Providing a ML solution to improve the value proposition offered to customers to drive more trips and increase market share. Helping the client by analyzing the promotions to enable them with insights and optimizing the product prices for better financial planning.

**Tools and Technology:** Python, SQL, Data bricks, Price optimization, Market Basket Analysis, CLTV, Customer Segmentation, Promotion Analysis, CPG domain

#### **Responsibilities:**

- Analyze historical promotions and provide an executive ready summary on promotion ROI, incremental lift and principles of winning and losing events.
- Leveraged ML techniques to segment customers using a combination of techniques such as CLTV, price responsiveness and historical customer behavior.
- Performed extensive analysis using SQL and Python, generated useful insights for marketing and strategy teams.
- Developed several hypothesis and KPIs to understand the ROI on different types of promotions at store and region level.
- Explored the different loyalty programs and suggested optimal beans model.
- Understood the historical price changes and calculated the price elasticities to determine most and least responsive items.
- Monitored product price changes and updated as needed.

# **Project 4: Anomaly Detection on Sales**

Business Objective: Develop a ML package that generate anomalies on sales and which can

be leveraged across all departments in retail industry.

**Tools and Technology:** Python, Pyspark, SQL, Data bricks, Time series, Anomaly Detection algorithms, Retail domain

#### **Responsibilities:**

- Created data ingestion pipeline in Azure cloud and monitored the jobs in Azure data bricks.
- Developed the package using different anomaly detection algorithms such as Zscore, IForest and HBOS.
- Provided options to generate anomalies on sales at different categories of store and regions.
- Worked and developed end to end anomaly model pipeline in azure data bricks, which helped the store managers for making better decisions on upcoming crucial events/days.

## **Educational Qualification:**

• B.Tech From Vasireddy Venkatadri Institute of Technology (VVIT), Guntur, Andhra Pradesh, India in 2018 with 74%.