

Suraj Bhadane

Data Scientist

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PROFESSIONAL EXPERIENCE

Solution Manager - Data Analytics & Strategy

05/2022 – present | Mumbai, India

COGITAAS AVA PET LTD

• Amazon: Promo Analysis:

Objective: Recommend optimal discounts and no of days to maximize revenue for LOreal products on the Amazon platform, by adjusting discounts during events and normal days.

My Role and Contribution:

- Pricing and Promotion Optimization across Amazon platforms. Analyzing the trade promos to help clients plan their trade spending more effectively by making recommendations.
- Led end-to-end **data preparation** and solution forming for Amazon promotional campaigns, leveraging data-driven decisions to drive business outcomes.
- Worked with data to build **statistical models (Machine learning)** and determine dynamic pricing; Delineating **Price Elasticity** to reflect the inverse relationship between volume and price using statistical modeling and also **ROI** to optimize spending budget.
- Created a solver in Python to identify the optimal condition for **revenue maximization**, such as determining the appropriate discounts and the number of days.
- Used **Power BI** as a reporting tool and generated visualizations to communicate insights and findings to stakeholders effectively.

Outcomes:

- Product-wise result for discounts on Event days, and BAU days.
- Adjusting the number of discount days for revenue maximization without compromising on the sales-to-expense ratio(spend/sales).
- Recommendations in implementable format (In line with the Guardrails file sent to Amazon by LOreal).

Skills Utilized:

- Python, R, Power BI, Data Analytics, Machine Learning-Clustering, Statistics-Regression.

• Amazon: Media Optimisation:

Objective: Analysis of Amazon search and display data [for Loreal] to maximize overall ROI by identifying top-performing assets and optimizing advertising spends within business constraints.

My Role and Contribution:

- Developed a comprehensive understanding of advertising dynamics on the Amazon E-Commerce platform, considering display impressions and consumer clicks. Analyzed factors such as ad positioning, targeting strategies, and asset performance to drive revenue growth.
- Utilized **R programming** and advanced statistical techniques (**Ridge & Elastic Net Regression**) to **model and analyze** data, identifying top-performing assets and optimizing spending allocation.
- Conducted rigorous data preparation, mapping attributes with business inputs, and engineered features for effective model inputs.
- Created insightful reports using **Power BI** to effectively communicate findings to stakeholders, enabling data-driven decision-making.

Outcomes:

- Calculate ROI at various levels (event, targeting, placement) to identify high-performing assets.
- Implemented optimized spending allocation strategies, resulting in increased overall ROI at the brand-category level. Provided actionable recommendations for adjusting spending on specific assets in the upcoming quarter.

- Improved advertising effectiveness and revenue generation on Amazon through strategic spending allocation.

• Consumer Surplus Factor (CSF):

Objective: Build a strategic pricing engine that identify optimal pricing strategy by comparing perceived consumer value (MCV) with current pricing to maximize revenue and market share.

My Role and Contribution:

- Developed an econometric model (CSF) using sales data and price elasticity to estimate Maximum Consumer Value (MCV) across consumer cohorts.
- Simulated pricing scenarios in Python to measure impact on volume, revenue, and share under "Do-Nothing" and "adjusted-price" conditions.
- Delivered strategic pricing recommendations based on consumer surplus insights and competitive benchmarking.
- Created Power BI dashboards to visualize pricing potential and communicate recommendations to stakeholders.

Outcomes:

- Identified significant price increase opportunities while maintaining market share.
- Enabled pricing realignment vs private labels to retain market share across 17 countries.

Skills Utilized:

- Python, Power BI, Econometrics, Elasticity Modeling, Strategic Pricing.

• Market Mix Modeling:

Objective: Estimate the contribution of marketing efforts and external factors on sales, and optimize budget allocation across media channels to maximize ROI.

My Role and Contribution:

- Developed a comprehensive MMM framework using **regression-based modeling** to decompose sales into base, incremental, and other drivers (price, media, promotions, seasonality, macroeconomic factors).
- Applied **adstock and S-curve transformations** to capture delayed and diminishing effects of advertising across ATL, BTL, and TTL channels.
- Conducted **due-to and contribution analysis** to quantify channel-wise impact and assess ROI.
- Used **optimization techniques** to simulate business scenarios and recommend budget reallocations (e.g., increasing TV GRPs or discount levels) for revenue uplift.
- Treated missing values and outliers effectively using imputation, forecasting, and domain logic.

Outcomes:

- Delivered ROI improvement opportunities by identifying optimal spend mix and budget strategies.
- Enabled business teams to simulate marketing decisions with projected uplift in sales and share.

Skills Utilized:

- Python, Regression Modeling, Time Series Analysis, Adstock/Saturation, Optimization, Marketing Analytics.

Data Science Intern

08/2021 – 03/2022 | Pune, India

iAnalyst Infotech Pvt Ltd

- Recommendation of learning path to student to achieve their goal by their ability:
Applied recent methods in IRT on data.
Data preparation, anomaly detection and smoothing, clustering (groups of questions based on their difficulties), build adaptive learning algorithm.
- Customer Churn Prediction:
Study the behavior of the user who left and who not left the service. Focused on users who left the service.
Created a model to catch users before they churn.
Data preparation, feature engineering, EDA, handled unbalanced data, all classification ML models and ANN.
- Predict Job type and Job category from Job description (NLP)
- Packages: NumPy, Pandas, Imblearn, Matplotlib, Scikit-learn, Tensorflow

ACADEMIC PROJECTS

Topic Modelling & Sentiment Analysis on Twitter Data

Master Degree Project

Objective: Extract the Twitter text data through API and find insights within the data. Analyzed a user's Twitter data to identify prevalent topics and sentiments using LDA Topic Modeling and Sentiment Analysis.

Roles and Skills: Extracted data using Twitter API. Conducted EDA, Text Pre-Processing, and Text Mining.

Applied Topic Modeling and Sentiment Analysis (Natural Language Processing)

Achievements: Identified key topics in the user's tweets using LDA. Analyzed sentiments, providing insights into their opinions.

EDUCATION

Master of Science in Applied Statistics

Sardar Patel University

2019 – 2021 | Anand, India

- Financial Statistics, Data Mining-Machine Learning.
- R, Python, C, C++, SQL, Minitab, SPSS, SAS

Bachelor of Science in Mathematics & Statistics

Savitribai Phule Pune University

2016 – 2019 | Pune, India

TOOLS & TECHNIQUES

Python

Pandas, Numpy, Sklearn, Seaborn, Matplotlib

R

tidyverse, dplyr, glmnet, dlm

Power BI

R Shiny

SQL

MS-Excel

SKILLS

Statistical Analysis & Modeling • Machine Learning • Dashboard – Power BI / R Shiny

CERTIFICATES

Data Science

iAnalyst Infotech Pvt Ltd

Introduction to Power BI

DataCamp

Building Web Application with Shiny in R

DataCamp

Python Regression Analysis: Statistics & Machine Learning Course

Udemy

Python And Statistics for Financial Analysis Course

Coursera

Bayesian Regression Modelling with rstanarm

DataCamp

C Programming Certificate Course

INTERESTS

Sketching • Tabla • Flute • Reading Books • Enthusiastically adopting new Tools and Techniques