Sonal Singh

sonalsingh2606@gmail.com   +91-9176166372   linkedin/sonal2606   sonalsingh96.github.io   medium.com/transformalytics

Experience | ~1.5 Years | CPG, Retail

Trainee Decision Scientist – Mu Sigma Inc.
Nov '19 - Present

Implement predictive models (Regression and classification) for solving business problems - generate insights and present it to the business and analytics teams of clients

SALES FORCE PLANNING & OPTIMIZATION | RUSSIAN PETCARE MANUFACTURER

- Built a **sales force planning and optimization tool** to maximize sales uplift or ROI and reduce expenditure
- **Clustered** outlets, measured impact of visits using a **regression** model and designed a **Mixed Integer programming** (MIP) based optimizer to generate visit plans
- Developed a planning & reporting tool using **PowerBI and PowerApps** to design plans and report results
- Impact of ~3% incremental **sales uplift**(+**$6.2MM**) and sales force expenditure **reduced by 24%($0.5MM)** – and savings of **960 hours/quarter effort**

MARKETING MIX MODEL & PRIORITIZATION ENGINE| ENERGY BAR MANUFACTURER

- Created a **marketing mix/driver model** for attribution of sales uplift to different marketing levers like **price promotions, social media, TV advertisements, In-Store sampling, features and displays** with **MAPE less than 20%** using ElasticNet regression
- Designed **an optimizer to create the best marketing plan** which takes into account the investment associated with each promotion channel and provides recommended investment across each channel to maximize ROI over the limited budget available for promotions
- Built **a prioritization engine** which recommends the stores and regions sales reps need to focus on for maximum uplifts, **reducing $390k in in-store sampling** investments and increasing sales uplift by 7%

Trainee - Mu Sigma Inc.
July '19 – Oct '19

Trained in Mu Sigma University – learning end to end components of DIPP framework and completed stretch projects under guidance of mentors

COMMERCIAL MARIO REPORTING| RUSSIAN CPG MANUFACTURER

- Built and automated the creation of business data mart – which was the single source of data to upsurge reporting of **SAP Atlas** based reporting metrics for **all manufacturing plants across Russia**
- Implemented a **data quality management layer** to the harmonized data source to improve the quality and scope of data driven decisions; that was subsequently leveraged to **refresh 20+ dashboards** relying on SAP Atlas data - resulting in 80% man-hours savings
- Designed and developed user friendly flexible and interactive **PowerBI Dashboards** to track and assess the performance of **supplier contracts** across Vendors/Materials/Plants

Publications

Optimizing Stock market prediction using LSTM networks

This paper proposes using a LSTM and auto-encoder based deep learning model to predict stock market price. The idea is to forecast stock prices and allocate stocks to maximize the profit within the risk factor range of the stock buyers and sellers.

Social media data analysis twitter sentimental analysis

This paper talks about sentiment analysis of tweets on the Barcelona terror attacks and observe, examine and analyze how people criticize a situation either by expressing their aggression against terrorist or supporting the victims.

Feature selection effects on classification algorithms

This paper compares the effect of feature selection on various classification algorithms. The vitality and vulnerability of K Nearest Neighbor, Naive Bayes and Support Vector Machines is examined.

SKILLS

Code	Tools & Viz
R	Jupyter
SQL	Azure & DevOps
Python	PowerBI
PySpark	OR-Tools

Analytics and Math

- **Statistics** - Hypothesis testing & experiment design
- Exploratory Data Analysis
- **Regression** (Linear and non-linear tree based)
- **Classification** (Logistic, Decision Trees, Ensemble – random forest/ XGBoost)
- **LSTMs**

Business

- Problem Solving
- Story Boarding
- Agile Management
- Stakeholder Management

ORG INITIATIVES

Trainer

- Trainer for internal teams on modeling in CPG Industry

HONORS

Awards

- SPOT award for technical capability, leadership and accountability

Certification

Google Analytics
DataCamp – R, Python

Internship and Training:

Web Development – Internship
Android Programming
Ethical Hacking

EDUCATION

Bachelor of Engineering
Computer Science
Veltech Technical University
2015 - 2019
GPA – 9.26/10.00

Secondary Education – CMS, Lucknow
CISCE - XII - 92% | X : 86%