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Experience | ~3 Years | CPG, Retail, Consumer Data Industry, Digital Broadcasting

Decision Scientist – Mu Sigma Inc.

Aug '19 - Present

Understanding client's business requirements to define problems; create end-to-end data driven solutions, generate insights and present it to the business and analytics teams of clients

SALES FORCE PLANNING & OPTIMIZATION | RUSSIAN PETCARE MANUFACTURER

- **Leading a team of 6 analysts in a \$1.3MM** engagement to build 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 **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**

STRATEGIC REVENUE MANAGEMENT | US CPG GIANT

- Created a **sales driver model** for attribution of sales volume to key imperatives for around ~5,000 products with **MAPE <20%** using ElasticNet regression
- Developed a **Trade Promotion Optimization (TPO)** framework which enabled the Account teams to design optimized promo plans leveraging **Seasonality, Promotional Pricing, Promotional Execution, Product Distribution, Co-promotion and Cannibalization with inter and intra competitors** for a win-win scenario with Retailers - leading to reduction of ~2100 hrs. of manual effort/quarter
- Developed a tool in **PowerApps** atop the sales driver engine, to scale insights generated and unlock potential across all products and retailers in the US - **unlocking potential value of ~\$7MM/year**
- The tool is powered by a **linear optimizer** on the sales driver model & builds a **52-week calendar** detailing optimal price points, ideal promotion weeks, and optimal execution distribution points

Trainee Decision Scientist - Mu Sigma Inc.

Aug '17 – July '19

Implemented advanced predictive models (Regression, Classification & forecasting) for solving business problems

COMPETITOR CLASH FORECASTING | US CPG GIANT

- Developed a Competitor Clash Forecasting framework to help **account managers design promotions** in accordance with forecasted competitor prices
- The framework uses **Holt Winter** models to forecast the prices of competitor products and uses these prices to predict manufacturer and category sales through a **regression-based sales attribution** model
- Built a dashboard in **PowerBI** for account managers to negotiate with category buyers to take data driven decisions to maximize sales considering ROI & retailer margin
- **30% reduction** in negotiation time and sales uplift of **2%(\$3.6MM)** across four retailers in six months

VIDEO OCCASION DETECTION & CLASSIFICATION | US CONSUMER DATA PROVIDER

- Implemented **CNN based YOLO object detection algorithm** for a video occasion detection tool – to detect the class and number of objects present in a scene – **mAP 51.5%**
- Built a **XGBoost** model to **classify a scene into consumption, transaction or celebration** based on the class and number of objects detected by YOLO – **Accuracy 87% / AUC 0.82**
- Created an industry-first dataset and tool for Consumer Behavior Data which was acquired by a Global Beverage Giant for **~\$5MM**

DIGITAL FINGERPRINTING | US BASED SPORTS BROADCASTER

- Designed a **Neo4j graph database** based digital fingerprinting model which **identifies unique users** across anonymous devices leveraging behavioral relationships
- Reducing advertising expenses by **\$0.8MM/month** by reducing number of targeted users

SKILLS

Code

Python
PySpark
R
SQL
OR-Tools

Tools & Viz

Jupyter
Azure & DevOps
PowerBI
Neo4j
Powerapps

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)
- **Time Series Forecasting**
- **Convolution Neural Networks**

Business

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

ORG INITIATIVES

Mentorship

- Project mentor - 12 junior analysts
- Python tutor - 20-member team

Trainer

- Trainer for internal teams on modeling and CPG Industry – trained 130 new inductees

HONORS

Awards

- 2 SPOT awards for technical capability, leadership and accountability
- Academic Excellence Award - 2017

Certification: Decision Sciences -

Certified by Mu Sigma for problem solving and analytical skills

EDUCATION

Bachelor of Engineering

Instrumentation Technology
Visvesvaraya Technological University
BIT, Bangalore | 2017

First Class with Distinction

Secondary Education – CISCE

XII - 85% | X : 88%