

# Sonal Singh

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[medium.com/transformatlytics](https://medium.com/transformatlytics)

**Experience** | CPG, Retail, Manufacturing, Supply Chain, Logistics, Fintech, Software Analytics

## Data Scientist (Lead)– Sigmoid Analytics

Mar '21 – Present

- **Leading a team of five data scientists** across **e-commerce, retail & software analytics**
- Designed & developed the **data infrastructure** for a \$2bn organization – which included data harmonization, descriptive & predictive analytics modeling POC and production stack
- Developed a **keyword & product recommendation engine** for an e-commerce retailer – which recommends the right keywords to bid for & the optimal bid price to maximize ROI
- Modeled **customer churn** for a gardening products retailer, using XGBoost classification models with high AUC-ROC of 0.96 – improvement of 0.12 pts. over previous RF model
- Built a **graph-based developer social network** which models interactions between developers, projects, teams and code to uncover latent relationships

## Analyst, Data Science – NIUM

Nov '20 – Feb '21

- Designed and developed a **business datamart** – harmonizing **third party API gateway, Google Analytics, Clevertap and internal data**.
- Developed **MLops** pipelines to ingest **unstructured MongoDB** data into **business warehouse**
- Delivered insights around **behavioral analytics** of users (e.g., conversion funnel, drop off behavior) - which helped strategize and benchmark **user-centric UI/UX changes**
- Built a **XGBoost classification** model to **predict if a user is going to transact** — reduced promo expenditure by **12%**
- Conducted **workshops** with **product teams** to evaluate and overhaul the **success metrics**

## Decision Scientist – Mu Sigma Inc.

July '19 – Oct' 20

### SALES FORCE PLANNING & OPTIMIZATION | RUSSIAN PETCARE MANUFACTURER

- Built a **sales force planning & optimization framework** to maximize sales uplift/ROI while reducing expenditure
- **Clustered** outlets and measured impact of visits on each cluster using a **regression** model
- Designed a **Mixed Integer programming (MIP)** based **optimizer** to generate visit plans
- Developed a planning & reporting tool using **PowerApps** to design plans & report KPIs
- 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 **sales driver model** for attribution of sales uplift to different marketing levers like price promotions, in-store sampling, features and displays using **ElasticNet regression**
- Designed a **marketing mix optimizer** to create the **best marketing plan** which takes the investment of each promotion channel and recommends investment to maximize ROI
- Built a **prioritization engine** which recommends the stores and regions sales reps need to focus on for maximum uplifts - **reducing \$390k in investment** & increasing sales uplift by 7%

### COMMERCIAL SUPPLY CHAIN INSIGHTS | RUSSIAN CPG MANUFACTURER

- Built and automated the creation of business data mart based on **SAP Atlas** & internal data
- Implemented a **data quality management layer** to the **harmonized data** source to improve the quality and scope of data driven decisions
- Designed and developed interactive **PowerBI dashboards** to track **supplier contracts**

## SKILLS

### Code

Python  
SQL  
R  
PySpark  
MongoDB

### Tools & Viz

AWS Sagemaker  
Azure & DevOps  
PowerBI/Tableau  
OR-Tools  
Google Analytics

## Analytics and Math

- **Statistics** - Hypothesis testing, experiment design & EDA
- **Regression**
- **Classification** (Decision Trees, random forest/ XGBoost)
- **Neural Networks/Deep Learning** – LSTMs and Natural Language Processing

## Business

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

## ORG INITIATIVES

- Trainer for internal teams on modeling

## HONORS

### Awards

- Award for technical capability, leadership & accountability

### Publications

- Optimizing Stock market prediction using LSTM networks
- Social media data analysis twitter sentimental analysis
- Feature selection effects on classification algorithms

## EDUCATION

B.E, Computer Science

Veltech Technical University

2015 – 2019 - GPA 9.26/10.00

Secondary Education – CMS

CISCE - XII - 92% | X : 86%