

# Syed Misbah

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[medium/data-decoded](https://medium.com/data-decoded)

## Data Scientist - CPG, Retail, Manufacturing, Energy, F&B, Airlines

### Lead, Data Science – Evalueserve

Mar '21 – Present

- **Leading** a team of **22 data scientists** for engagements across manufacturing, energy, and F&B
- Building a deep learning **CNN based object detection model** which identifies defects in galvanized plates for a steel manufacturing client – **improving defect detection by 54%**
- Improved pre-existing **XGBoost and Random Forest** classification **models** for an energy giant
- Designed & developed the **data infrastructure** for entire DIPP lifecycle for a **\$10bn** retail organization – including data harmonization, descriptive analytics & predictive modeling - POC and production stack
- Overhauled the **MLOps** pipelines for three clients – migrated from archaic legacy deployments to microservices based loosely coupled data infrastructure.

### Founder and Lead Instructor – Career Compass

Oct '20 – Feb '21

- Founded a **data science career transition startup** which aims to bridge the gap between the supply and demand for good data talent
- Facilitated **250+ professionals** into top analytics firms and expanded team to **15+ instructors**
- Transitioned and handed over to co-founder

### Decision Scientist, Lead – Mu Sigma Inc.

Aug '19 – Sep '20

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

- **Lead** 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 **regression** & designed a **Mixed Integer programming (MIP)** based optimizer to generate visit plans in PowerApps
- **~3% sales uplift(+ \$6.2MM)** and expenditure **reduced by 24%(\$0.5MM)** – savings of **960 hrs/qtr 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**
- The tool is powered by a **linear optimizer** on the sales driver model & builds a **52-week calendar** detailing optimal price and execution points - **unlocking potential value of ~\$7MM/year**

### Decision Scientist - Mu Sigma Inc.

Aug '17 – July '19

#### COMPETITOR CLASH FORECASTING | US CPG GIANT

- Developed a Competitor Clash Forecasting framework to help **account managers design promotions**
- 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
- **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**

## 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 (EDA)**
- **Regression** (Linear and non-linear tree based)
- **Classification** (Logistic, Decision Trees, Ensemble – random forest/ XGBoost)
- **Time Series Forecasting**
- **Deep Learning - 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

- 3 awards for technical capability, impact award for leadership & accountability
- Academic Excellence Award - 2017

**Certification:** Decision Sciences - Certified by Mu Sigma for problem solving and analytical skills

## EDUCATION

**Bachelor of Engineering, IT**  
*Visvesvaraya Technological University*  
BIT, Bangalore | 2017  
**First Class with Distinction**

**Secondary Education – CISCE**  
XII - 85% | X : 88%