**Syed Misbah | Data Science & Engg. Manager**

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**~7 YOE in AI / Machine Learning |** Marketing, TV/OTT, CPG & Retail, Airlines

[**DISH NETWORK**](https://en.wikipedia.org/wiki/Dish_Network) **- DATA SCIENCE & ENGG. MANAGER** *Nov ‘21 – Present*

* AI/ML leader at **DISH India -** Impact of **$3.5M+** in revenue & savings, **saved 380 hrs. / qtr**. in effort
* Identified, converted **& delivered** high ROI opportunities to **boost leadership’s confidence** in AI/ML
* **Built & developed a talent pool of 15+** people to tackle more significant & high-impact challenges

#### GEN AI – LLM ChatBot (RAG / PEFT / DPO)

* Developed a chatbot using **RAG** and **LangChain** for querying Confluence documentation of tech teams; uses **LLama2 7B** as the base model, **ChromaDB** vector store and **FAISS** for similarity search
* Experimented with **PEFT (LoRA/QLoRA)** based fine-tuning - but no significant improvement over RAG
* Currently finetuning on **Mixtral MoE 8x7B** Model using Direct Preference Optimization (DPO)

#### Market Mix Modeling (MMX)

* Successfully developed & deployed a MMX solution which **manages $230M/yr.** across **17 channels**
* Uses a combination of **ridge regression-based attribution model** and non-linear optimization
* **2.4% lift in activations** compared to BAU allocation–**reduced SAC by 4.8%**

#### Dynamic Creative Optimization (DCO)

* Built the DCO solution for serving dynamic creatives to prospects, optimizing elements in real time
* Developed the **ML web service** using AWS Lambda, DynamoDB, API Gateway & CloudFront – which stitches and delivers creatives (HTML/JS Zip bundle) to ad serving platform (Flashtalking)
* Implemented **Bayesian Bandits** for continuous optimization of elements towards higher CTR
* **~39% CTR uplift**, **0.9% acquisition uplift**, and savings of **290 hrs./qtr. Effort**

#### AI Smart Bidding Platform

* Developed the **Smart Bidding Algorithm** which optimizes for spend on high ROAS patterns (**‐17% SAC)**
* Led **MTA (Multi Touch Attribution)** initiative to enable holistic view of channel ROAS
* Built **subscription & viewership forecasting** model > led to +0.12 AUC for downstream churn models

**EVALUESERVE - LEAD, DATA SCIENCE** *Mar ‘21 – Oct’ 21*

#### CUSTOMER CHURN PREDICTION | Garden Products Manufacturer

* Modeled **customer churn** using ensemble Random Forest and XGBoost classification models
* **Improved AUC from 0.78 to 0.91** using feature engineering and hyper parameter tuning
* **Improvement of 31.4%** in retention rate compared to previous heuristics-based solution

**MU SIGMA INC. - DATA SCIENTIST** *Aug ‘17 – Sep ‘20*

#### Sales Force Planning & Optimization | Russian Petcare Manufacturer

* **Led** a team of **six data scientist** to build a sales force optimization tool to **maximize sales uplift & ROI**
* **Clustered** outlets, measured **impact of visits** using regression & generated **optimized visit plans**
* ~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 to key drivers with **MAPE <20%** using ElasticNet
* Developed a **Trade Promotion Optimization (TPO)** framework which enabled client to design optimized promo plans leveraging **Seasonality, Pricing, Execution, Distribution, Co‐promotion & Cannibalization**
* Powered by a **linear optimizer** atop the sales driver model ‐ **unlocked potential value of ~$7MM/year**

#### Competitor Promo Clash Forecasting | US CPG Giant

* Developed a promotion clash forecasting framework to help **account managers time promotions**
* The framework uses a combination of **time series forecasting** & **attribution** models
* **30% reduction** in negotiation time and sales uplift of **2%($0.9M)** across four retailers in six months

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# SKILLS

### Stack

Python AWS Stack

R Dataiku

SQL /DynamoDB Neo4j Graph DB

OR‐Tools Tableau / Power BI

### Core Areas

* **Statistics** ‐ Hypothesis testing, ANOVA & experiment design
* **Regression** (Linear / Tree based)
* **Classification** (Logistic, Decision Trees, Ensemble – random forest/ XGBoost)

##### Time Series Forecasting

* **Deep Learning ‐** Language Models
* **AWS Services** for ML services deployment using API Gateway, Lambda, Glue, Athena, S3, Sagemaker

# LEADERSHIP

### AI/ML Center of Excellence

* Establishing AI/ML COE – which serves as the central team for driving data culture at DISH India and Tech
* Training executive leadership team on evangelizing data & AI / ML

### Mentorship and Support

* Mentor for 2 senior and 1 Junior DS
* Cross functional ML solution engineer for hardware engg. and ad-tech team

## EDUCATION

**Bachelor of Engineering, IT**Bangalore Institute of Technology  
VTU | 2013 - 2017

##### First Class with Distinction

##### Academic Excellence Award

**Secondary Education**

Carmel Junior College, CISCE

2012 – XII : 85%

2010 – X : 88%

# HONORS & AWARDS

* **3 spot awards** for technical capability & **2 impact awards** for leadership & accountability