

# Harsh Kumar

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**Data scientist with solid business background and love for engineering**

More than 8 years of experience including 2 years of leading high performing teams. Experienced in solving complex ML problems and clear communications with stakeholders and leadership

## Programming

- Python
- SQL (BigQuery, Postgres, Hive)
- Go
- SAS

## Machine Learning

- XGBoost
- Light GBM
- Random Forest
- Regression
- Recommender Sys.
- kNN
- Feast (Feature store)

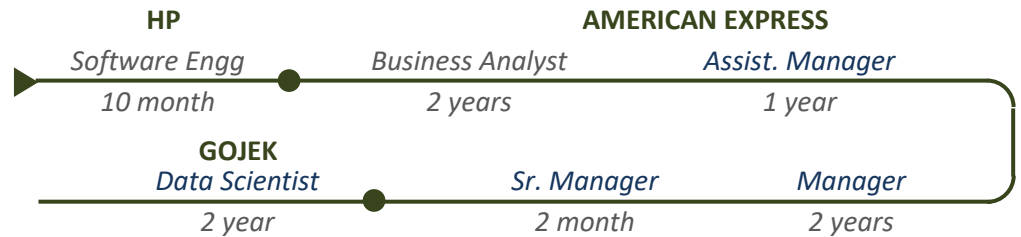
## Tools

- Jupyter Notebook
- Git
- Google Cloud Platform (GCP)
- UNIX Shell Scripting
- Google Data Studio
- Tableau
- CI/CD

## Other skills

- Experimentation
- MLOps
- Team Management
- Project Management
- Stakeholder Communication

## Professional Experience



### Data Scientist, Pricing and Supply Teams

Gojek | May 2021 – Present

- Developed Go module to pool multiple orders to enable cost efficient deliveries
- Led design and development of next generation of supply positioning solution which improved recommendations and reduced maintenance overheads
- Developed and deployed end-to-end ML pipeline in production including ETL, feature creation, automated model training, model serving and monitoring
- Designed and implemented monitoring + alerting systems to keep track of health of production models using tools like BigQuery, Data Studios, Airflow
- Evaluated impact of new product rollout by designing randomized control experiments, hypothesis testing and presenting results to stakeholders
- Reduced the bandwidth used for ad-hoc tasks by 66% through activities like code optimizations, dashboard revamp and standardising analysis process
- Served as the Data Science representative in marketplace architecture group where I was responsible for good design & architecture of tech products

### Senior Manager, Merchant Marketing Analytics

American Express | April 2016 – May 2021

#### Leadership and People Management

- Lead a team of 4 analysts which provides analytics support to Merchant Marketing. Responsible for people leader tasks like hiring, coaching, project allocation and performance evaluation, along with the complete responsibility of delivering high-quality analysis for decision making

#### Machine Learning and Predictive Modelling

- Developed atleast 15 predictive models using machine learning techniques like XGBoost, GBM, kNN, Collaborative Filtering, Sequence Mining
- Built a predictive model using XGBoost to prioritize phone calling based on the likelihood of picking-up calls and incremental value generated

## Research Paper

“Speech based Emotion Recognition based on hierarchical decision tree”

Presented at National Conference on Communications

## Certifications

- [Coursera] Machine Learning Engineering for Production (MLOps) Specialization
- Coursera - Machine Learning by Andrew Ng

## Other Achievements

- 4th Rank among 447 students (IIM Indore)
- 1<sup>st</sup> Rank in UPSE Central Armed Police Force Exam offered the position of Assistant Commandant
- Solo Bike Journeys from:
  - Delhi-Spiti (1500 km)
  - Delhi-Pune (3000 km)
  - Delhi-McLeod Ganj
  - Delhi-BLR (2000 km)
- Former member of several IIM Indore clubs and committees (eg. Coordinator of Finance Lab)

- Led the development of several marketing models to target the right set of customers with Airline Offers. This involved prediction of propensity to travel, forecasting future airline spends and predicting travel destination
- Developed Merchant Anomaly Prediction model that predicts terminal disruption, suppression and surcharge. Used tools like Hive, Python, Shell Scripting, kNN & GBM. Scaled and deployed the model to multiple geographies which led to a significant cost reduction for Merchant Services
- Other models: Home Mover Predictor (GBM), Wedding Party Prediction (GBM), Going to College Predictor (GBM), Home Renovator Predictor (GBM), Car Purchase Model (Sequence Mining), B2B Merchant Recommender (Collaborative Filtering), Prospect Customer Identifier (kNN)

## Innovation

- Conceptualized and led the implementation of “Customer Travel Identifier” to identify trips of customers using tools like DBSCAN and Hadoop Map-Reduce
- Site Evaluator – A versatile tool built on Tableau to analyse the performance of existing retail stores and recommend potential locations of new stores

## Strategic Insights and Custom Consulting

- Recommended new store locations for a US pet supplies retailer, by developing a site selection methodology which was sold to several other retail merchants

## Recognition

- Awarded the highly prestigious GCSG President’s Award, 2018 which is awarded to top 2-3% of American Express employees globally
- Received the Most Innovative Thinker Award in Q1 2017 and Q3 2017 and declared Analyst of the Quarter for Q3 2016
- Recognition from Partners – Awarded Custom Consulting Internal Partner Award by US Merchant Marketing team for “highly valued partnership”

## Software Engineer II, Merchant Marketing Analytics

Hewlett Packard | July 2011 – April 2012

- Designed and implemented a highly scalable and flexible testing framework, resulted in reduced probability of error and improved testing efficiency
- Received HP eAward for outstanding effort & enthusiasm at work and Mini-Improvement Award for designing highly scalable testing framework

## Education

### CFA Program

Passed all three levels of CFA Program | 2018

### Post-Graduate Program in Management (MBA)

Indian Institute of Management Indore | 3.62/4.33 | 2016

### Bachelor of Technology (Electronics and Communication)

Indian Institute of Technology Guwahati | 8.84/10 | 2011