Harsh Kumar

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https://harshkumar.in   LinkedIn   YouTube Channel   Github

Experienced Data scientist with solid business background and love for engineering
8+ years of experience including 2 years of leading high performing teams. Experienced in solving complex ML problems, building MLOps pipelines and clearly communicating with stakeholders and leadership

Programming

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

Machine Learning

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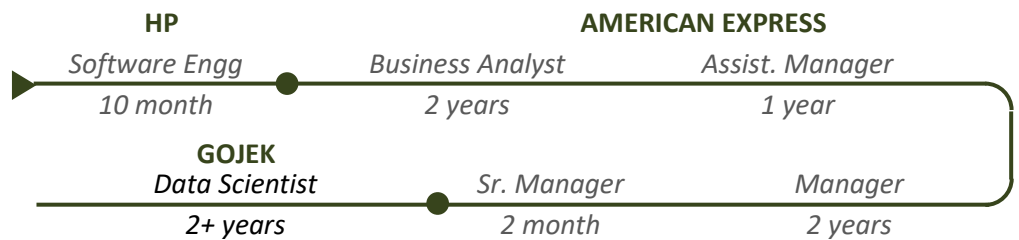- Recommender Sys.
- Feast (Feature store)

Tools

- Jupyter Notebook
- Git
- Google Cloud (GCP)
- MLFlow
- Tensorflow
- dbt
- Scikit-Learn
- UNIX Shell Scripting
- Google Data Studio
- Tableau
- CI/CD

Other skills

- Experimentation
- MLOps
- Team Management
- Hiring and Coaching
- Performance Review
- Project Management
- Stakeholder Communication

Professional Experience

HP	AMERICAN EXPRESS	
Software Engg	*Business Analyst*	*Assist. Manager*
10 month	*2 years*	*1 year*

GOJEK		
Data Scientist	*Sr. Manager*	*Manager*
2+ years	*2 month*	*2 years*

Data Scientist, Pricing and Supply Teams
Gojek | May 2021 – Present

- Led all ML pricing efforts for entire Singapore market and generated about $50,000 uplift in gross take per month by rolling out a new objective function
- Built and maintained end-to-end MLOps pipeline in production including ETL, feature creation, automated model training, model serving and monitoring
- Led design and development of next-gen driver positioning product, improved recommendation quality by 15-30% and reduced maintenance overhead
- Developed Go module to pool orders which helped reduce delivery costs
- Designed and implemented monitoring + alerting systems for production models using BigQuery, Data Studios and Airflow which captured 2 critical bugs
- Evaluated impact of new product rollout by designing randomized control A/B 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 DS representative in Tech Architecture group for 6 months; drafted and reviewed 6 ADRs/RFCs on good software design and architecture

Senior Manager, Merchant Marketing Analytics
American Express | April 2016 – May 2021

Leadership and People Management
- Lead a team of 4 DS and analysts for 2 years which included 2 annual cycles of performance review. Expanded team by hiring and coaching 2 new members

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

- Led the development of more than 4 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 Business Partners – 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