Ramanathan
Statistical Modelling
Data Science
AI/ML

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B.Sc. Statistics (1999, 72%)
MBA Finance (2001, 62%)

Executive Summary

- Data Evangelist who is **obsessed with data** and believes good mix of transformations and of techniques on data will answer all right questions
- Have processed data to the tune of **100 million records** building data pipelines end to end such that information retrieval is quick and handy
- Modelled customer behaviour and **predicted high value customer** early in life cycle with ensemble of tree-based models and regression models
- **Segmented customers** to tailor offer in retail setups. Have also applied clustering for varied applications
- Rich experience working in **time series data** solving problems in forecasting demand, inventory planning, mark-down pricing
- Built data teams from scratch, played **mentor role** for each of team member and have been responsible for analytics deliveries owning from data acquisition/ingestion, feature engineering and presenting top line findings
- Interacted with business **stakeholder** in formulating the business requirement that can be met with data backed intelligence
- Expert in devising logical approach to problem solving and **handy with statistical techniques**
- **Actively coding** in Python(scikit-learn, tensorflow), R, Scala, SQL, Spark, Hive
- Comfortable with **Linux OS** in private/public Cloud set up and Git
- Have executed **Deep Learning** project that predicts water level in paddy field from images
- Supervised a **NLP text classification** project that uses Deep Learning
- Skilled in managing **end-to-end ML projects** from requirement gathering, formulation, planning, scheduling, execution and deployment in production
- Mature, composed & trusted technology leader, with thorough experience in adapting technology expertise to business vision

| Reliance Jio
Bangalore
Lead Data Scientist
Mar 2018 - March 2019 | **Ad Targeting with Association Rule Mining**
- Built a Recommendation system that targets subscribers identified in 100 interest categories
- The algorithms used are **collaborative filter – subscriber based/interest based** and **matrix factorization**
Subscriber Interest Tagging from browsing behaviour
- Identified Subscriber preferences, for the purpose of targeting, from the pages they browse using **NLP – Topic Modelling**
- Predicted subscriber current interest in near real time with **CNN** in **PyTorch. Acc 75%**
Gender and Age Prediction
- Built a **FC ANN** model to discover behavioural Gender and Age of the subscriber using the subscribers' recent activity recorded in the system
- This furthered in targeting right audience by **25%** |

	Influence Score • Influenced the subscriber response to ad with the help of his/her social network(Family/Profession/Interest group) • Mentored the team to use **Spark GraphX** and derive influence score of each individual on others in the network **Home Location Prediction** • Labelled Tower as Residential/CBD/Rural/Highway etc with **K-Means(using MLLIB) Clustered** traffic in each of tower split by hour • Collaborated with tower teams to rightly identify towers • This created new segments for targeting
Gale Partners **Bangalore** **Sr. Associate - Analytics** **May 2015 - March 2017** **Client: Leading Resort in Malaysia**	**Big Data Pipeline** • Built **Data Pipeline** using **Spark Scala** to move data from **AWS S3** to **Hive** • Mentored the team migrate the Data Pipeline to **Pentaho** **Customer Segmentation** • Reduced the heterogeneity in customers by grouping them into 25 segments based on **RFV** using **K-Means Cluster(using R)** • Built a system that accounts for latest data and appropriates each customer to a segment • Accelerated customers migrate to high value segment deriving probability of migration using **Markov model** **Customers Classification** • Identified high value customers early in life cycle with classification algorithms **Decision Tree/Logistic Regression ensemble classification model** with accuracy of 85% accuracy
Target Corporation **India** **Bangalore** **Team Lead** **May 2011 - May 2015**	**Hypotheses Testing** • Pharmacy Buyers' high value decision hypotheses are **statistically validated** with carefully curated data • Experiments designed on need basis and analysed **Pharmacy Inventory** • **Significant Cost savings** achieved through inventory policy backed with data and unique factors that affected pharmacy drugs business **Store Segmentation and Sales Forecasting** • Accurately forecasted sales for store segments (hierarchical clustering) and distributing them to each store • This resulted in right inventory during seasons yielding huge cost savings **Promotion analytics** • Led the team that designed experiments for price reduction of generic drugs • The impact of price reduction is assessed, and **cannibalization** effect discovered leading to tweak in promotion decisions **Assortment Optimization** • Contributed to Assortment Optimization algorithm that was built in-house

Optimum Solutions **FO Development and** **Support** **Aug 2007 - Aug 2010**	**Client: Credit Suisse, London / Singapore / Pune** 1. Trader FO support 2. Managed systems that generate Risk Exposure 3. Automated and Managed **Data Pipeline**
Genpact **Bangalore** **Senior Consultant** **Aug 2006 - Aug 2007** **Client: Online Payment** **system market leader**	**Propensity to default** • Built a **Logistic Regression (in SAS)** to predict default on payment. Inferred right probability cut-off with **ROC graph** and compared multiple models with **AUC** **Applications Forecasting** • Forecasted using **ARIMA** the number of applications we would receive for credit card **Target Identification for Campaigns** • **Designed the experiment** Based on objective of campaign • Identify Test/Control customers, publish post campaign analytics
Apex-Decisions.com **Bangalore** **Statistical Analyst** **Apr 2004 - Feb 2006** **Client: Garment retail** **chain**	**Price Elasticity** • Modelled markdown that generates desired response from market using **Regression** **SKU clustering and Sales Forecasting** • Segregated SKU's with **Hierarchical Clustering** • Forecasted sales as a function of **stock-on-display, price, discount, seasonality index** • Quantified the impact of various markdown scenarios on sales
Research Interface **Bangalore** **Research Analyst** **Apr 2003 - March 2004** **Client: FMCG giant**	**Market Research** • Designed **Market Research** Experiments • **Analyse the variance** of customer responses to flagship products • provide **insights** into what data analytics reveal • 4. End to End project monitor for delivery
Ocwen Financial **Solutions Private** **Limited** **Sep 2001 – Mar 2003**	**Back office Operations** • Bankruptcy Reconciliation Mortgage document validation