

## Professional Summary

- 5.5+ years of work-ex in Machine Learning , Data Science, Product & Strategy helping Mid/Top Management in leveraging Advance AI, ML and Data Science to build financial impact
- Specialize in enhancing quality of strategic decisions, shaping business strategy and helping company and function improve top-line and bottom-line using Advance Analytics, Innovations & Machine learning to unravel interesting patterns in data & business processes
- Accustomed to work with Top management in global and Indian corporate environment
- Diverse experience & expertise in AI, Machine Learning, Predictive Analytics, Business Intelligence, Research & Development, Product Management, Strategic Marketing, Innovation, Home Loans, Risk & Compliance

## Professional Experience

<b>BA Continuum India Pvt. Ltd. (Bank of America)</b>	<b>Gurgaon/ Mumbai, India</b>
<b>Manager – Innovation &amp; Machine Learning, Global Risk &amp; Compliance</b>	<b>Aug.2019 - Present</b>
<b>Assistant Manager – Automation, Tech &amp; Tool, Global Risk &amp; Compliance</b>	<b>Aug.2017 – Aug.2019</b>

### Transformational Strategy of Enterprise Independent Testing

- Improved legacy UI capabilities, functionalities & efficiency (1.5X faster). Powered by **machine learning based search bar** (Tabu Search) and integrated with all data sources, making UI one stop solution for all **Testing Requirement** (aka to obtain test details, data source, connection, regulations and more)
- Delivered **7 independent proofs of concept**, showcasing end to end **Test Automation** (population, sampling & testing) right from data source till testing results. Identifying Process gaps, Implementation gaps, and other delinquencies. Recommended adoption of uni platform and in-house user defined functionalities in **Phase I 2018-19 Testing COE**
- In 2019, **1.6 mn business documents** (scanned/ non-scanned/ structured/ semi-structured) text extraction, transformed and loaded to databases using **FOSS application along with OCR engine**. Increased data centricity and reusability of information to uncover potential insights and further process gaps
- **15k hours annualize saving & \$ 3.6+ mn of OPEX funding** by implementing 2 process automation for associate surveillance & Home Loan Credit Testing, covering **Reg. V, Z, F, I and more**
  - NLP & document classification with **Random Forest on document features and Bayesian latent variable** (confidence variable based on presence of terms selected from TFIDF)
  - Identifying scenarios and patterns in associate activities impacting Financial Centers using **Transition Probability Matrix**
- **2019 Technology & Machine Learning Technique Adoptions:**  
Best search algorithms, data wrangling platform, job scheduler, version control platform, software development and collaboration, speedy deployment, FOSS/ control environment, customize application building platform, monitoring & detection of anomalies tool and business intelligence tool
- Setting up a **control room environment** for continuous development and monitoring
- Launched **Testing as a Service (TaaS) consulting initiative** for front line and third line of defense
- **Network model** for relationships in regulations and identifying leftover areas of testing
- **Topic modeling algorithm**, uses naïve clustering at start and finally cluster using mix of correlated topic model and LDA for scientifically assigning the audit & compliance issue to their respective categories
- **Check box identification using SVM and Multi-layer perceptron** for identifying key flags status from customer loan applications. For example: “self-employed checkbox” checked as Yes or No etc.
- **Time series modeling**, implemented an intermittent time series model with defect percentages varying between 0-100(%) for monthly onsite-testing of Financial Centers.
- Supporting MRM (model risk management team) for risk assessment, origination, mitigation, modeling (statistical) methodologies suggestions. Two model assessment:
  - PPNR (pre-provisioning net revenue) model**, assessing how bank earning could be affected in economic downturn
  - Bayesian Elastic Net model**, assessing Paid visit impact of on organic visits in channel marketing

<b>Snapdeal</b>	<b>Gurgaon, India</b>
<b>Business Analyst – Data Science</b>	<b>Aug.2015 – Aug.2017</b>

### Recommendation System (Next Best Offer)

- Used APRIORI Algorithm, extended with text mining (NLP methodology) for few product categories and further improved to logical item set mining (LISM) for long tail (distribution) selling product

- Phase II development
  - Item-Item recommendation for price sensitive branded products
  - Customer-Item recommendation using customer attributes like Gender, Premium Buyer, Family Orientations etc.
- Used User Feature–Product Feature (least square machine factorization) recommendation. Suggested time sensitive recommendation as advancement

### Other Projects & Responsibilities

- **Customer Retention Strategies** - Improved customer retention by 8% over 3 months
- **Pain points identification** - To reduce burn, pricing correction and improve/reduce logistics costs
- **SCM** – Identified and corrected the estimates of goods purchase, biased due to flow of demand variation all throughout the order to inventory model
- **C-Suite Dashboards** - Proposed/created the cross-selling/up-selling, retention cohorts, customer journey (LTV), conversion, promotion ROI metrics & Dashboard
- **Growth Hacking** – Studied various seasonal dimensions and designed multiple experiments for targeted approach. Mostly A/B Testing using designed experiment basis moment estimations. Few of them showed over 200% of improvement (~6.5 mn of sale difference a day)
- **Algorithm and attributes** - To simplify customers profiling at globally (8+ company level metrics/ model creation for customer profiling). Used technologies such as R, Python, MongoDB, SQL etc. and methodology like survival analysis, linear regression, logistic regression, k-means clustering, factorial analysis, collaborative filtering, XGBoost etc.

### HCL Technologies

#### Senior Executive – Corporate Strategic Marketing

**Noida, India**

**Jun.2014 – Aug.2015**

### Delta Value Proposition Model (Differentiated offering to customers)

- Ecosystem for strategic marketing team to get information like M&A, Financials, News, Social Activities, Current technology offerings etc. from Bloomberg, Factiva, Discovery, Yahoo directly via API and computed delta change in offerings with the competition. Thus able to score peers and clearly identify the gaps in service offerings

### Deal Win Model for ADM

- Empirical study of existing pool of deals were studied to formulate Bid to Win scenario
- Quantified linkage between the “contract's/ service line” prior activity to risk of early closing using prior activity, few other parameters like service line, length of contract, ACV. Logistic regression model was created. Target variable DWL (Deal Win likelihood) showed higher probability have greater chances of winning than the deal

### Other Projects & Responsibilities

- **ROI of Strategic Marketing based on Digital/ Funnel** – Created single point of truth for all investments including Go to Market strategies for different markets/services/channels/aspirational accounts
- **Marketing reports** - Digital Dashboard | Deal Mix Report | Rebid Deal Analysis for go to market
- **Growth reports** – RTB/CTB moments | Funnel movement | Digital web performance | ROI metric for content, channel | Brand Indexing
- **Revenue forecasting** – To understand company performance and budget allocation
- **Others** - Social media analytics, text analytics, web content scoring, Attribution Modeling

### Education

**Indian Statistical Institute (ISI), Assam/Kolkata, India**

**2011 – 2012**

Post Graduate Diploma in Statistical Methods and Application

**University of Delhi, Delhi, India**

**2008 - 2011**

B.Sc. Applied Physical Sciences (Mathematical computing)