ASHISH DHIMAN

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Education

Georgia Institute of Technology, Atlanta, USA
Master of Science in Analytics: Computational Data Analysis & Analytical Tools Track — *Aug 2022 — Dec 2023*

Relevant Coursework: Analytical Modeling, Machine Learning, Regression, Deterministic Optimisation, Big Data Analytics#, Bayesian Statistics#, Data & Visual Analytics#, Graph Algorithms#, Large Scale Data Analysis#, Foundations of Ethical ML#

Indian Institute of Technology, Kharagpur, INDIA — **GPA: 8.32/10.0 | Class Rank 2**
B.Tech(Honours) in Aerospace Engineering, with Specialisation in Optimisation Theory — *Jul 2015 — May 2019*

Relevant Coursework: Programming & Data Structures, Probability & Statistics, Linear Algebra, Operations Research, Optimisation Methods in Finance, Nonlinear Programming, Numerical Solution of Differential Eqns., Managerial Economics

Work Experience

American Express, Credit & Fraud Risk — Gurgaon, India

Senior Analyst - Data Science — *Aug 2021 — Jul 2022*

- **Trade Linkage Graph**: Developed graph network basis shared trades in bureau data for yearly default savings of **$2.5M**
- Delinquency Index: Used balance & delinquency time series data to improve capture of high balance defaulters by **1.1%**.
- **Covid Payment Plan**: Sr VP award for developing a xgboost pipeline on AWS to identify customers availing pmt. relief.
- Subprime Data: Used DataX, Teletrack & Clarity from Equifax/Experian to add **74bps GINI** lift in low tenure defaulter.
- **Feature Selection**: Gradient Boosted method & min-Redundancy Max-Relevance on data of **24M rows** using map-reduce.

Analyst - Data Science — *Aug 2019 — Jul 2021*

- **Customer Segmentation**: Predicted external issuer with highest **share of wallet** in bureau, to identify growth buckets.
- Resume Parsing: Slashed resume screening time by **30%** with NLP: **zero-shot classifier**, & Named Entity Recognition.
- **Covid Trigger Parsing**: Analyst of Quarter for automated dashboards from trigger data, using cron, helping save 3 days.
- External Pmt. prediction: Improved accuracy of the model **by 7%**, using Synthetic minority over sampling **SMOTE**.

Analyst Intern - Data Science — *May 2018 — Jul 2018*

- **Customer Contact Prediction**: Improved GINI of External Contact GBM model by **16%** and reducing variables by **22%**.
- Hyper-parameter optimization: Developed a automated grid search module of **GBM** with Python & Bash, saving 1 day.

Quantiphi Analytics Pvt. Ltd, Athena's Owl — Mumbai, India

Decision Science Intern — *May 2017 — Jun 2017*

- Object Detection: Adjudged Best Intern-2017, for developing Object detection module of Athena's Owl using (**R-CNN**).
- Web Scraping: Implemented a module to scrape meta-tags out of unstructured data, using **Selenium & Beautiful Soup**.

Technical Skills

- **Programming languages:** C | C++ | Python | MATLAB | Scala | SQL | R | SAS | Octave | LaTeX | Bash | Excel
- **Software/Frameworks:** AWS | Pyspark | Spark | Hive | Tableau | Hadoop | Map Reduce | Deepnote | Git | OOPs
- **Machine Learning:** Big Data | XGBoost | A/B Testing | Optimisation | Forecasting | Database | Statistical Modelling

Projects & Publications

University of Otago, Information Science Department — Dunedin, New Zealand
Research Intern — *May 2019 — Jul 2019*

- **MCMC Search on Grammar**: Published in **IJCAI'21** to infer Norms expressed as instances of Probabilistic Grammar.
- Applied Monte Carlo Markov Chain (**MCMC**) technique to sample the posterior distribution of Candidate Norms.
- Transposed **Gelman Rubin** measure to analyze the convergence of MCMC chains in grammar space using **tree kernels**.

IIT Kharagpur, Vinod Gupta School of Management — Kharagpur, India
Bachelor's Dissertation — *Aug 2018 — May 2019*

- **Enhanced Index Tracking**: Used MILP with Heuristic Kernel Search framework to improve investment return **by 12%**.
- Used Nonnegative Principal Components and Nonnegative Matrix factorization to abstract the short-term noise in the model.

Awards & Achievements

- Achieved an **All India Rank within Top 0.5**% in the JEE 2015, among the 1.3 million registered applicants.
- Received letter of appreciation (2015) from **HRD Minister**, Gov. of India, for ranking amongst the Top 1% in Class 12.
- Finished with **Class Rank of 2** at IIT Kharagpur and awarded **Gymkhana Award** for contribution to Inter Hall events.

Expected Future Courses