

HARSH B. GUPTA

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EDUCATION

The University of Texas at Dallas <i>Master of Science - Business Analytics (Data Science)</i>	May 2019 GPA 3.7
University of Pune, India <i>Bachelor of Engineering - Electronics and Telecommunications</i>	May 2013 GPA 3.5

EXPERIENCE

Senior Data Scientist – Fractal Analytics – San Jose, CA Sep 2021 – Present

- **A/B Testing for Email Campaigns:** Conducted comprehensive A/B testing to optimize email campaigns, including segmentation and multivariate analysis, and iterative refinement of content and design driving the product adoption up by 15%.
- **Causal Inference:** Designed and executed testing experiments to measure the causal impact of sales consultants on program revenue, leading to improved resource allocation and capturing additional 23 million in annual revenue.
- **Efficient Algorithm Implementation:** Designed and implemented efficient matching algorithms (random selection, k-NN) for observational studies, resulting in a 90% reduction in time for estimating program incrementality.
- **Long Tail Prediction:** Developed and implemented a predictive model for long-tail customer prediction, leveraging new signals and iterative training to achieve 25%+ improvement in predictive accuracy, influencing HC allocation decisions.

Data Scientist – BBVA Bank – Houston, TX Aug 2019 – Aug 2021

- **Recommendation Engine:** Developed a product recommendation engine using association rule algorithm in Python, to provide the next best product cross-sell opportunity for commercial customers, increasing product subscriptions by 8%
- **Prospect Modeling:** Built a customer lookalike model, to identify prospects for merchant services campaign initiative, capturing estimated benefit of over USD 1.3 million
- **BI Dashboards:** Developed dynamic and interactive dashboards in Tableau and Google Data Studio to provide tracking of various key metrics and performance indicators

Data Science Intern – IHS Markit – Houston, TX Jun 2018 – Aug 2018

- **Machine Learning:** Trained models in Python to automate manual data parsing process, achieved >96% accuracy rate by using random forest, MLP, DNN, hyperparameter tuning with grid search and cross-validation, resulting in time reduction by 88%
- **Data Cleaning:** Transformed and cleansed unstructured data using Python to conform to the business requirements

Research Analyst – Markets and Markets - India Aug 2013 – Jul 2017

- **Forecasting:** Estimated and forecasted the sales revenues and growth rates of MICRO and MACRO technology markets
- **Business Intelligence:** Authored 15+ business intelligence reports, generating over USD 5.8 million in revenue for clients

HACKATHONS AND COMPETITIONS *(view entire project portfolio at harshgupta.com)*

Sign Language Interpreter using CNN – UNT 2019 Hackathon – Winner [\[GitHub\]](#) [\[YouTube\]](#)

- Implemented a sign language interpreter to help deaf people with their daily communication needs using Deep Learning
- Created a dataset of over 105k greyscale images of 44 gestures in American Sign Language using OpenCV library in Python

Los Angeles Restaurant Analysis and Prediction – INFORMS Analytics Challenge – Winner [\[GitHub\]](#)

- Built a Naïve Bayes classifier model to predict the health grade of the restaurant in the 88 cities of the Log Angeles County using only its name, address, and zip code with an accuracy of 63%
- Clustered the data using K-means clustering and visualized it on Tableau to understand the effect of seasonality, restaurant type, violation code, and demographics on the grade of the restaurant

Product Sales Prediction – UTA Analytics Competition – Winner [\[Article\]](#)

- Analyzed 200k+ customer reviews of products using Natural Language Processing to understand the impact of customer sentiments on 37k+ Pier1 home décor products
- Designed a model to predict the success of product with an accuracy of 88%, using SVM, decision tree and random forest

SKILLS

Technical: Python, R, SQL, SAS, Spark, Hive, Hadoop, Sqoop, SPSS, Power BI, Tableau, ETL, AWS Cloud, Azure, GCP, Google Analytics, Advanced Excel (Pivot Table, VLOOKUP, Macros), TensorFlow, NumPy, pandas, scikit-learn, matplotlib, ggplot, HTML, Data Mining, Clustering, Regression Modeling, Statistical Modeling, Quantitative Analysis, A/B Testing, Strategy Consulting