

Suraj Shourie

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Experience

WebstaurantStore | Senior Data Scientist

Aug 2024 - Present

Lead data science across search, recommendations, marketing experimentation, and customer analytics. End-to-end ownership from model development to stakeholder communication, with **\$5M+ in annual revenue impact**.

Recommendation Systems and Search

- Built a logged-out user recommendation model using item viewing history that generated \$3M in annual revenue.
- Improved search page rankings by incorporating past user impressions, increasing CTR by 3%.
- Trained a two-tower deep learning model using user/item features to serve real-time recommendations to 5M+ users.

Marketing Experimentation:

- Enhanced marketing experiments by designing a DBSCAN clustering tool for unbiased geo-splits in A/B tests.
- Analyzed geo-experiments using a Bayesian (PyMC) framework, leading to incremental annual revenue of \$1 million.
- Designed and ran pricing experiments to map demand elasticity, laying foundations for an automated pricing system.

Customer Analytics:

- Developed a predictive customer lifetime value (LTV) model, increasing Return on Ad Spend (ROAS) by 15%.
- Reduced customer churn by ~ 5% using a survival model that surfaced at-risk accounts, enabling targeted retention outreach.
- Developed a time series forecasting model for staffing requirements using Prophet; saved \$1 million in annual costs.

BBDO | Data Scientist (intern)

May 2023 - Dec 2023

Developing data-driven marketing solutions for a Telecom client

Atlanta, GA

- Conducted **sentiment analysis** via **BERT-Transformer** on reviews scraped from 1000 advertisements using Selenium.
- Scored 200 US counties on proprietary network metrics to rank markets by product placement opportunity.
- Built a geo-targeted Tableau **dashboard** blending public traffic and internal data to prioritize markets for a new campaign.

Goldman Sachs Asset Management | Associate

Nov 2019 - Apr 2022

Quantitative Associate building financial models and managing \$1Tr+ in assets

Bengaluru, India

- Improved risk model stability for a \$1Tr fixed-income portfolio by diagnosing and correcting variance instability, contributing to a **20% gain** in prediction accuracy across multiple financial products.
- **Simulated scenario analysis** to stress-test profitability of investment strategies in collaboration with traders.
- Refined process flow for handling large datasets on SQL, decreasing computational time by 50%.
- Designed dynamic web dashboards using AngularJS for spotting arbitrage opportunities and outlier visualization.

Linedata | Analyst

Jun 2017 - Sep 2019

Creating data solutions and financial risk reports for global insurance firms

Mumbai, India

- **Led 3-member team** delivering analytics to major US insurance firm and catalyzed 100% contract value increase.
- Automated client reports and designed interactive dashboards by using **RMD and R packages** such as dplyr for data manipulation and analysis and ggplot for data visualisation, achieving a **60% reduction** in report turnaround time.

Projects

- **GPT-3 Powered (Email Generator)**: Built a prompt-based email generation app using GPT-3 and deployed an interactive Streamlit interface for end users.
- **Multilingual Classification via Dual Modalities (Deep Learning Project)**: Developed a multimodal classifier combining Hindi/English transformer models with CNN image encoders, improving F1 score by 10% versus single-modality baselines.
- **Forecasting sales for Sparse Data (Best Buy Competition)**: Developed a LightGBM model, with lagged sales and 50+ predictors, beating ARIMA & LSTM models with faster training time, securing 2nd place in the competition.

Education

Georgia Institute of Technology

Aug 2022 - Dec 2023

Master of Science in Analytics

GPA: 3.8/4

Indian Institute of Technology, Bombay (IITB)

Aug 2013 - May 2017

Bachelor of Technology in Material Science

GPA: 8.2/10

Technical Skills

- **Programming Languages**: Python, R, SQL, JS
- **Visualization Tools**: Tableau, Looker, Streamlit, R Shiny, AngularJS, D3, Matplotlib
- **DevOps and Cloud Technologies**: GCP, AWS, Git, Docker, Airflow, Snowflake, CI/CD
- **Machine Learning and Deep Learning**: Scikit-learn, TensorFlow, PyTorch, XGBoost, NLP, Transformers, LLMs, RAG