

Rishabh Singh

Data Scientist — Pharma Forecasting, MMM & Advanced ML Modeling

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Professional summary: Data Scientist specializing in pharma commercial analytics, forecasting, and machine-learning–driven insights. Experience across HCP/HCO analytics, mixed-effects sizing models, MMM, time-series forecasting, and dashboard-based decision support. Proven ability to translate complex data into actionable commercial strategies by collaborating with Forecasting, PACE, and Insights & Analytics teams. Skilled in Python, model building, Streamlit/Flask, Figma dashboarding, Azure/AWS deployment, and mentoring junior analysts.

Professional Experience

Chryselys

Data Scientist (Pharma Forecasting & Analytics & Development)

Hyderabad, India

Feb 2025 – Present

- **Forecasting PoC delivery:** Co-developed forecasting algorithms and pipelines used in proof-of-concept work for multiple major pharma clients. Owned dashboard delivery (Figma & live web app) and presented insight decks for client steering discussions.
- **Model performance & operationalization:** Implemented time-series cross-validation, error-tracking (MAPE/RMSE), and model comparison frameworks; collaborated with backend teams to prepare models for deployment.
- **Streamlit tools & enablement:** Built and iterated a Streamlit-based typing tool that automated typing and profiling workflows, reduced manual preprocessing steps, and enabled non-technical stakeholders to explore segmentation outputs.
- **FFO sizing & Mixed-Effects models (productization):** Extended and stabilized Mixed-Effects sizing models; contributed to code hardening and documentation for model reuse in go-to-market sizing exercises.
- **Otsuka — CENTA (continuation):** Advanced the integration of MMM outputs with planned ML forecasting models by refining feature engineering, implementing promotion-response features, and preparing model-ready datasets.
- **Cross-functional delivery:** Worked closely with Forecasting, Product, and Insights & Analytics teams to deliver end-to-end forecasting solutions; coordinated requirements, aligned KPIs, and streamlined the reporting cadence between analytics and commercial teams.
- **Business development support & research:** Performed industry and company-level research across EU market players to support business development initiatives.
- **Mentorship (second cohort):** Provided the second-cycle, programmatic mentorship to data-science trainees — covering advanced Python workflows, model validation, production-readiness checks, code reviews, and stakeholder-ready presentation of results.

Chryselys

Associate Analyst (Internship)

Hyderabad, India

Oct 2024 – Jan 2025

- **First mentorship (foundational):** Ran the inaugural mentorship cohort in Hyderabad covering Python fundamentals, machine-learning basics, end-to-end modeling workflows, and hands-on exercises; onboarded and guided new trainees through their first projects.
- **Zolgensma — Attitudinal Segmentation:** Led the attitudinal segmentation workstream for the Zolgensma account — conducted profiling, persona development, and storyboarding; created segmentation artifacts used for campaign targeting and stakeholder storytelling.

iNeuron.ai

Machine Learning Intern

Remote

Mar 2024 – Apr 2024

- Built a **phishing-domain detection** model using Random Forests on a dataset of approximately 147,000 URLs; engineered features, performed model selection, and produced validation metrics for production-readiness assessment.
- Packaged the model behind a **Flask REST API** and deployed the demo on Microsoft Azure; integrated a lightweight front-end to allow end-users to submit URLs for real-time classification.
- Documented the evaluation workflow and created example notebooks to demonstrate reproducibility and extension points for future work.

Selected Projects

- **Parking Management System** — Full-stack Flask + Vue.js app with Redis/Celery; deployed on Azure; supports booking flows and operational analytics dashboards.
- **Indian Housing ETL Pipeline** — End-to-end scraping, cleaning, validation and storage pipeline (PostgreSQL & MongoDB) with >180k records for downstream analysis.

- **Mixed-Effects Marketing Modeling** — Implemented hierarchical regression to estimate campaign elasticity and partition global vs campaign-level effects for marketing budget allocation.
- **Audio Classification (UrbanSound8K)** — Complete ML pipeline (feature extraction: mel-spectrograms/MFCCs, model training/evaluation) for urban-sound classification tasks.
- **Compass (Bloglite)** — Flask-based blogging platform demonstrating ORM, authentication, CRUD operations, and deployment.

Core Skills

Modeling & Statistics:	Forecasting (ARIMA/ETS/Prophet), Mixed-Effects Models, Marketing Mix Modeling (MMM), Regression & Tree-based models, Time-series CV, Segmentation, Attribution analytics.
Programming & Tools:	Python, scikit-learn, pandas, NumPy, TensorFlow/PyTorch (familiar), Streamlit, Flask, FastAPI, Tableau, Figma, Git, Jupyter.
Data & Cloud:	PostgreSQL, MongoDB, Dataiku, Databricks(familiar), Azure (App Service, functions), AWS (S3, Lambda basics), Redis, Celery, REST APIs.
Domain & Delivery:	Pharma commercial analytics, HCP/HCO analytics, FFO sizing, demand planning, dashboarding, stakeholder communication, mentorship.

Education

Indian Institute of Technology Madras (IIT Madras)

2021 – 2025

Bachelor of Science — Data Science & Applications Minor: Economics & Finance

GPA: 7.89 / 10

Relevant coursework: Machine Learning, Neural Networks, Probability & Statistics, DBMS, Deep Learning, Game Theory, Software Engineering.

Certifications & Achievements

- HarvardX — Data Science: R Basics (2025)
- University of California, Davis — Data Visualization with Tableau (2024)
- Microsoft — Azure Data Fundamentals (DP-900)
- Microsoft — Azure AI Fundamentals (AI-900)
- SQL (Basic) — HackerRank
- Rank-3, IIT Madras CodeChef Programming Competition (2022)
- Mentored junior data-science trainees at Chryselys (onboarding, code reviews, technical guidance).

Location & Availability:

Open to roles in Hyderabad, Bangalore, Pune, Noida, Gurugram; available for hybrid/onsite pharma analytics positions.

Links:

[Portfolio](#) | [GitHub](#) | [LinkedIn](#)