

Hasnain Sizar

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PROFESSIONAL SUMMARY

Data and Business Analyst with hands-on experience translating large healthcare, financial-services, and hospitality datasets into pricing, marketing, and operational decisions. Strong in SQL, Python, and Power BI/Tableau, with a track record of shipping KPI dashboards, A/B testing frameworks, and forecasting models that drove measurable revenue and ROI lift. Comfortable partnering with revenue, marketing, and operations leaders to scope requirements, define metrics, and ship analytics products end to end.

SKILLS

SQL & Querying: PostgreSQL, MySQL, T-SQL, Window Functions, CTEs, Stored Procedures, Query Optimization

BI & Visualization: Power BI (DAX, Power Query M, Row-Level Security, Deployment Pipelines), Tableau, Looker Studio, Excel (Power Query, PivotTables)

Languages: Python (Pandas, NumPy, Statsmodels, Scikit-learn), R

Statistics & Experimentation: A/B Testing, Hypothesis Testing, Regression, Time Series, Bayesian Inference

Data Stack: Snowflake, BigQuery, Databricks, Azure Data Factory, AWS S3, DBT, Salesforce

Tools: Git, JIRA, Confluence, Agile/Scrum, Business Requirements Documentation (BRD/PRD)

PROFESSIONAL EXPERIENCE

Choice Hotels | Los Angeles, CA

Jun 2025 - Present

Business / Data Analyst

- Built a demand-forecasting model in Python and SQL on 2 years of booking and ADR data; output fed the weekly revenue-management committee, reducing forecast MAPE from 18% to 12% across 80 properties and informing dynamic pricing decisions.
- Built 4 Power BI dashboards (occupancy, ADR, RevPAR, channel mix) using DAX measures and a star-schema Power Query model; adopted by the GM, revenue operations, and marketing as the weekly source of truth, replacing a manual Excel rollup that cost roughly 3 hours per week.
- Delivered 20+ ad-hoc SQL and Python analyses for revenue and marketing leadership; cut average ad-hoc request turnaround from approximately 3 days to 4 hours by templating the most-requested pulls.
- Designed A/B test framework for 3 promotional campaigns covering sample sizing, hypothesis registration, and holdout analysis; winning treatment lifted loyalty engagement +7% over control on a 25- property pilot.
- Partnered with marketing on segment-targeting recommendations grounded in booking-history clustering; targeted campaigns showed +15% conversion over the broad-list baseline on a 60-day window.

Prime Therapeutics | Remote

Sep 2024 - Jun 2025

Junior Data Scientist

- Built XGBoost claims-volume forecast on 24 months of historical PBM claims; cut forecast MAPE by 10% relative to the prior linear baseline; output consumed by Operations and Finance teams for monthly capacity planning.
- Authored 6 Python and SQL ETL jobs ingesting claims, formulary, and member data from 5 source systems; daily refresh moved off ad-hoc scripts onto a scheduled, monitored pipeline with run-time alerting.

- Built 3 Tableau and Power BI dashboards exposing prescription and claims trends to marketing; targeting changes informed by the dashboards lifted campaign ROI +15% year over year.
- Engineered 25+ features (lag windows, formulary indicators, member-tenure flags); lifted model AUC from 0.78 to 0.84 on holdout.

Bank of America | New York, NY

Jun 2023 - Aug 2023

Data Science Intern

- Co-developed real-time fraud detection pipeline in Python and SQL on 2M+ daily card transactions; cut false-positive rate by approximately 10% via retuned threshold logic and a new feature set.
- Engineered transaction-velocity and merchant-cluster features on 2M+ daily records; recall up +9% on the weekly evaluation set.
- Shipped 2 Tableau dashboards (fraud trends, model performance) used daily by fraud-operations analysts; replaced 2 manual Excel reports.
- Refactored 4 SQL extraction queries (CTE to indexed temp tables); cut average runtime by 14%.

PROJECTS

Causal Impact of Mid-Season Managerial Changes on Team Performance

Python, Scikit-learn, Statsmodels, Pandas, SQLite, Selenium

- Combined Propensity Score Matching and Difference-in-Differences to estimate the causal effect of mid-season manager firings on team performance across a 68,404-match panel covering the top 20 European leagues over six seasons (2019/20-2024/25).
- Found firing causes a +0.292 xGD gain per match over 12 matchweeks (95% CI [0.192, 0.392], $p < 0.001$); built the data pipeline (API-Football, Transfermarkt via Selenium, 6-table SQLite of 2,053 firings) and validated results with covariate balance, event-study pre-trends, and placebo tests.

Income Classification Using Machine Learning

Python, NumPy, Pandas, Scikit-learn, PyTorch, Matplotlib

- Built and compared classification models (Logistic Regression, Decision Trees, SVMs, and a PyTorch neural network) on the UCI Adult dataset; reached 91% validation accuracy via structured hyperparameter tuning.
- Used cross-validation and model-selection strategies to manage bias-variance tradeoffs and ensure consistent holdout performance.

Face-Controlled AI Game (Real-Time Computer Vision)

Python, OpenCV, MediaPipe, Pygame

- Built an interactive system that converts facial movements into real-time game controls using MediaPipe facial-landmark tracking.
- Refined frame-processing workflow with smoothing techniques for stable, low-latency input.

EDUCATION

Bachelor of Science in Data Science, University of California, Irvine

Relevant Coursework: Machine Learning, Statistical Analysis, Data Structures & Algorithms, Database Systems, Data Mining, Linear Algebra, Probability & Statistics

CERTIFICATIONS

- Microsoft Certified: Power BI Data Analyst Associate (PL-300), in progress
- Data Scientist with Python, DataCamp, 2023