Urja Damodhar

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Summary

Data Scientist with a strategic mindset and a record of building explainable, high-impact solutions across NLP, behavioral analytics, and risk modeling. I turn complex data into clear insights through thoughtful experimentation, pattern discovery, and end-to-end execution.

Technical Toolkit:

Programming & Modeling: Python (Pandas, Sklearn), SQL (PostgreSQL), Time-Series, LSTM, K-Means, A/B Testing
Data Platforms & Tools: Databricks, Snowflake, AWS (Glue, S3), Web Scraping
Visualization & Reporting: Tableau, Looker Studio, Excel

Experience

Machine Learning Research Assistant Boston, MA | Jan 2024 – Present
Boston University

- Designed a custom Transformer-based LLM model with gated embeddings, symbolic tokenization, and positional encoding to decode Morse sequences, following a comparative evaluation of six NLP sequence models
- Achieved 27% improvement in auditory recall accuracy through a 10-week behavioral experiment with 215 participants, using T-tests and regression to validate results
- Engineered pipelines to analyze 300 years of currency design, uncovering aesthetic trends using time-series clustering
- Automated data ingestion and preprocessing workflows using Databricks notebooks, improving reproducibility and reducing cleaning time by 40%
- Co-authored Visual Python**,** an interactive symbolic logic learning module; mentored junior researchers and ensured milestone delivery on grant-funded projects
- Led a team of research assistants and reported project progress directly to the lead professor, driving collaboration and delivery

Data Scientist - Researcher
GLOB-S Research Lab Boston, MA | Jul 2024 – Jan 2025

- Applied econometric and causal inference methods (DiD, panel regression, fixed effects) to uncover post-disaster innovation and sentiment shifts
- Processed and analyzed 1M+ media records using BigQuery, improving marketing strategy performance by 25% via Looker Studio dashboards
- Built ML models to impute 600K+ missing values, improving data quality and enabling robust downstream modeling
- Automated scalable ETL pipelines in Snowflake, supporting multi-institutional research projects with reliable transformations
- Managed documentation, data hygiene protocols, and reproducibility standards across grant-funded research cycles

Data Science Intern
Flip Robo Technologies LLC Remote | Apr 2021 – Oct 2021

- Built credit risk models for microloans using Python on 100K+ records, improving approval accuracy by 12%
- Created Tableau dashboards to visualize risk metrics, reducing default rates by 8% and aiding decision-making
- Engineered risk features and automated data cleaning, cutting preprocessing time by 30%

Computer Science Educator
WhiteHat Jr Pune, India | *Aug 2020 – Aug 2021*

- Taught 1,200+ virtual sessions to 35+ global students in Python, SQL, Tableau, and ML; earned 4.9/5 rating with 95% retention
- Led hands-on projects using pandas, scikit-learn, and SQL; 90% built functional data-driven apps
- Mentored in Tableau, adapted lessons for diverse learners, and aligned with stakeholders to improve insight communication

Education

Boston University, Master of Science in Applied Data Analytics Sep 2023–Jan 2025
Coursework: Data Mining, Deep Learning, NLP, Business Intelligence and Analytics, Intro to Optimization
Achievement**:** Bagged 1st place at Boston University Hackathon 2024 for Data Science Model Driving Business Impact

World Peace University, Bachelor of Engineering in Information Technology
Coursework: Data Structures & Algorithms, Probability and Statistics, Database System

Projects

Marketing Campaign Analytics (link)
Python • SQL • Tableau • A/B Testing • KPI Analysis • Customer Segmentation
Optimized campaign performance by engineering KPIs, merging response variables, and conducting A/B tests. Enhanced targeting and conversion tracking through behavioral segmentation and SQL-powered Tableau dashboards.

Customer Churn Intelligence Engine (link)
Snowflake • SQL • CI/CD • Time-Series • FinTech
Designed a modular churn tracking system using Snowflake pipelines and version-controlled SQL scripts. Enabled customer segmentation and churn prediction across banking cohorts, improving retention analytics and downstream ML readiness.