URJA DAMODHAR
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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 Boston, MA
Achievement**:** Bagged 1st place at Boston University Hackathon 2024 for Data Science Model Driving Business Impact

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

WORK EXPERIENCE

Data Scientist - Researcher Jul 2024 – Jan 2025
Glob ~ s Research Lab Boston, MA

- Applied econometric and causal inference techniques (panel regression, fixed effects, DiD) to uncover post-disaster innovation and sentiment shifts
- Processed and analyzed over 1M+ media records using BigQuery, improving marketing strategy performance by 25% via Looker Studio dashboards
- Automated Snowflake data workflows, enabling scalable transformations and ensuring error-free ETL across multiple research initiatives
- Built ML models to impute 600K+ missing values, enhancing dataset quality and supporting accurate downstream modeling
- Managed lab-wide operations including documentation, reproducibility protocols, and data hygiene workflows to support grant-based research delivery

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

- Fine-tuned a domain-specific large language model (LLM) based on transformer architecture for Morse Code decoding; customized tokenization, gated embeddings, and positional encoding to improve sequence retention and accuracy
- Conducted a 10-week ML-driven behavioral experiment with 215 participants to assess auditory recall; analyzed 20,000+ responses and achieved a 27% accuracy improvement using statistical models including T-tests and regression
- Engineered time-series pipelines to analyze 300 years of currency design; applied statistical and clustering techniques to uncover long-term trends and aesthetic patterns across global economies
- Automated data ingestion and preprocessing workflows across experimental datasets using Databricks notebooks, enabling scalable transformations and improving reproducibility while reducing cleaning time by 40%
- Co-authored Visual Python, a symbolic learning module for abstract programming logic; led visual module design to enhance learner comprehension through interactive visualization
- Mentored junior researchers, coordinated deliverables with faculty, and ensured timely execution of grant-funded milestones through organized updates and shared protocols

Marketing Data Analyst Oct 2021 – Dec 2022
Brandstormer Media Pune, India

- Worked on digital marketing analytics for a B2C e-commerce cosmetics brand, applying data science techniques to optimize engagement across personalized campaigns.
- Improved click-through rates by **10%** through A/B testing and T-test analysis on promotional content variants
- Built dynamic Tableau dashboards to monitor campaign performance metrics like CTR, open rates, and conversions in real time.
- Raised response rates by 6% using customer segmentation with K-means clustering for personalized content delivery.
- Boosted email open rates by 10% through send-time optimization using time-series forecasting.
- Enhanced personalization with **LSTM-based sentiment modeling** and word embeddings, improving customer satisfaction by **7%**
- Collaborated with marketing teams using **CRM platforms** to support automation, targeting, and content lifecycle workflows

PROJECTS

Predicting Stock Movement Using News Headlines (link)

- Built a Random Forest model with 70% accuracy, linking sentiment analysis of 10,000+ stock headlines to 2–3% price changes
- Delivered actionable insights for short-term trading strategies, improving portfolio performance in simulations

Twitter Sentiment Analysis (link)

- Developed an innovative real-time sentiment analysis system on Twitter, achieving 86.7% accuracy
- Engineered an end-to-end pipeline integrating live data extraction, NLP models, and deep learning for sentiment analysis

SKILLS

- **Programming & Visualization:** Python, SQL, R, Excel (VBA), Tableau, Matplotlib, Seaborn, Stata, Git
- **Data Engineering & Automation:** OpenCV, Pandas, NumPy, Feature Engineering, Data Wrangling, Endogeneity Testing, AWS
- **Machine Learning:** TensorFlow, Scikit-learn, Transformer Models, Predictive Analytics, Deep Learning, NLP, Time-Series Analysis, Sentiment Analysis, Clustering, Anomaly Detection, A/B Testing,