ROUNAK LADDHA

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EXPERIENCE

Data Science Practicum Intern-Random Shopping Cart Generator

Pure Platform, Chicago (remote)   January 2025 - May 2025

- Designed a hybrid recommendation engine (ALS + TF-IDF + Market Basket Analysis) using Pure Platform's dataset (10,000+ users) to simulate realistic shopping carts; evaluated variants through offline metrics (accuracy, product match rate) and simulated A/B testing to compare model effectiveness.
- Built a KPI-tracking dashboard using Streamlit to simulate user login, product search, and behavioral tracking (cart, favorites, views); optimized backend data pipelines (ETL, Parquet) to reduce load time to under 5 seconds.
- Extracted high-lift product affinities (lift > 27) across categories like Computers & Electronics and Health & Fashion using pattern recognition, enabling product bundling recommendations.
- Skills: Python, SQL, Streamlit, ALS, TF-IDF, Market Basket Analysis, Parquet, ETL, Pandas, Data Visualization, Recommender Systems, Product Analytics.

PROJECTS

Retail Forecasting – Walmart Weekly Demand Prediction

- Built a multi-model inventory forecasting system leveraging Prophet and XGBoost to predict weekly sales across 45 Walmart stores and 81 departments, attaining a 24% MAE reduction over baseline.
- Merged 3 datasets and engineered 7+ temporal features to capture local trends and seasonality, simulating real-world demand shifts similar to restaurant performance tracking.
- Engineered and submitted a full 115,064-row competition-style forecast file using (Store + Dept) average fallback logic, achieving WMAE of 3643.34 and aligning with real-world evaluation metrics.
- Deployed an interactive Streamlit dashboard displaying XGBoost vs Prophet forecasts, enabling sales managers to identify and address accuracy gaps in 5 store departments.

Smart Resume Parser – NLP And ATS Optimization

- Developed a **named entity recognition (NER)** system using **spaCy** and fine-tuned **BERT**, achieving a 66% macro F1-score across 10 custom entity labels (Name, Email, Skills, etc.).
- Created a Streamlit app allows resume uploads (PDF/text), real-time model selection (BERT vs spaCy), entity visualization, and JSON downloads; processed 100+ resumes in interactive test runs.
- Trained and aligned a BERT token classification model using HuggingFace Transformers and PyTorch, resolving Word Piece token alignment issues and improving precision/recall across 10 entity labels.

SKILLS AND CERTIFICATIONS

CERTIFICATIONS

- HackerRank SQL (Intermediate) – Certified,2024
- Python for Everybody (Coursera, University of Michigan) - Completed 4 courses with 98%+ average grade across all modules.

TECHNICAL SKILLS

- Programming Languages: Python, SQL.
- Machine Learning & Analytics: Statistics, Scikit-learn, TensorFlow, Regression, Hypothesis Testing, Keras, NumPy, Pandas, Matplotlib, Seaborn, Feature Engineering, Model Evaluation, Predictive Modeling, EDA, ETL.
- Programming Skills: Data Structures and Algorithms, Object-Oriented Programming (OOP).
- Tools & Platforms: Snowflake, Tableau, Power BI, Microsoft Office Suite (Word, PowerPoint, Excel and Outlook), Flask, Streamlit.

EDUCATION

Illinois Institute of Technology, Chicago, IL   Expected December 2025
Masters of Data Science

PVG'S College of Engineering and Technology, Pune, India   June 2023
Bachelor of Engineering in Information Technology, GPA: 3.3