ROUNAK LADDHA

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EXPERIENCE

Data Science Practicum Intern

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

- Designed and developed a hybrid recommendation engine (ALS + TF-IDF + MBA) leveraging Pure Platform's proprietary dataset (10,000+ users) to simulate realistic shopping carts; accomplished 80% offline accuracy and 3/5 product match rate in rule-based evaluations.
- Built an interactive Streamlit web app supporting login simulation, product search, behavior tracking (cart, favorites, views), and MBA fallback logic - reducing load time to under 5 seconds via Parquet-optimized data pipelines.
- Extracted high-lift product affinities (lift > 27) across categories Computers Electronics and Health Fashion, enabling proposed bundling strategies; visualized networks for business interpretation and actionable insights.
- Skills: Python, SQL, Streamlit, ALS, TF-IDF, Market Basket Analysis, Pandas, Data Visualization, Product Affinity Analysis, Parquet, Recommender Systems.

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

- Engineered a named entity recognition (NER) system using spaCy and a fine-tuned BERT model to extract structured fields (Name, Email, Skills) from resumes; achieving a 66% macro F1-score in extracting structured resume data.
- 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: Scikit-learn, TensorFlow, Keras, NumPy, Pandas, Matplotlib, Seaborn, Feature Engineering, Model Evaluation, Predictive Modeling, EDA
- Programming Skills: Data Structures and Algorithms, Object-Oriented Programming (OOP).
- Tools & Platforms: 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