HRIDAY RAJ

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SKILLS

Programming: Python, R, SQL, C, React Native

Data Visualization: Matplotlib, Seaborn, Tableau

Deep Learning Frameworks: PyTorch, TensorFlow 2.x, Keras

Tools: Git, Jira, Confluence,

EXPERIENCE

AI/ML Intern Bahwan Cybertek | Jun 2023 - Aug 2023

- Created a custom keyword extractor in python using natural language processing techniques and for feedback management systems to lower operating costs.
- Conducted in-depth research to create a custom keyword extractor for a Word Cloud with packages such as SpaCy, Rake-NLTK, Keybert, TextRank, Gensim, and YAKE to ultilize efficient algorithms for keyword extraction from textual data to replace Microsoft Azure.
- Validated with Fscores and optimized the keyword extraction algorithm for enhanced accuracy and performance.
- Documented research findings, methodologies, and recommendations to facilitate knowledge sharing and future improvements.

Project Manager Willamette University Athletics | May 2024 - Present

- Led defensive strategy analysis using HUDL, collaborating with coaches to align metrics with team goals and communicate strategy to players.
- Developed and visualized performance metrics (e.g., pass pressures, coverages) within a website for user-friendly visualizations and presented actionable insights to enhance defensive tactics
- Established a data pipeline and created standardized methods of data collection to streamline ongoing metric analysis and strategy development.

Selected projects

Willamette University Aug 2022 - Present

Recommender systems: Aug 2023 - April 2024

- Built diverse recommender systems using advanced algorithms such as the Apriori algorithm, Graph Neural Networks (GNN), and Singular Value Decomposition (SVD) to enhance user experience and deliver personalized content.
- Implemented the Apriori algorithm to identify frequent itemsets and generate association rules, optimizing marketing strategies and inventory management.
- Utilized Graph Neural Networks (GNN) to leverage relational data for more accurate recommendations, improving user engagement through personalized suggestions.
- Applied Singular Value Decomposition (SVD) to decompose large user-item interaction matrices, significantly reducing dimensionality while preserving essential data features.

EDUCATION

Willamette University Aug 2022 - Aug 2025

Degrees: M.S. Computer Science | B.S. Computer Science and B.S Data Science | Minor in Mathematics and Statistics

Activities: NCAA Division III Football, Statistics Teacher's Assistant, Peer Tutor

Willamette University Football Aug 2022 - Present

- Dedicated 30-40 hours weekly to rigorous physical training, traveling, competition, and team meetings while maintaining academic excellence