Rahul Reddy

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EDUCATION

University of Illinois at Urbana-Champaign   **Graduation Date : May. 2025**
MS, Information Management – GPA : 4.0/4.0   *Champaign, Il*
    Coursework: Data Visualization, Probability and Statistics, Text Mining, Advanced Machine Learning, Deep Learning

Jawaharlal Nehru Technological University Hyderabad   **Graduation Date : May. 2023**
B.Tech, Computer Science - GPA : 3.77/4.0   *Hyderabad, India*

WORK EXPERIENCE

Cline Center   **May. 2024 – Present**
Data Scientist Intern   *Champaign, Il*
- Identified inefficiencies in the existing ETL pipeline, proposed and implemented an Azure-based solution, streamlining cross-team collaboration, improving performance by **17%** and an annual cost savings exceeding **$100k.**
- Built predictive models to forecast profitability and market reach, presented key insights to investors utilizing **Power Bi** reports, secured **$600K** in additional funding.
- Replaced an existing machine learning classifier with GPT -4 using Azure OpenAI Studio, and fine-tuning them using LoRa techniques, increasing accuracy to **97%** and significantly reducing false positives by **56%**, saving **$60k** dollars annually.
- Developed clustering models to help detect redundant data during data collection phase, and to eliminate biases in the datasets.
- Utilized **Agile** methodologies to effectively prioritize and manage sprints, ensuring efficient management of resources and time.

UIUC, Department of Accountancy   **Jan. 2024 – May. 2024**
Research Assistant   *Champaign, Il*
- Developed an ETL pipeline in AWS Glue, that ingested data from APIs, S3 buckets, into Redshift, **saving 15 hours/week** in processing time.
- Deployed ML clustering model on AWS SageMaker with data stored in AWS S3, decreasing training time by **25%.**

PROJECT HIGHLIGHTS

Deep Learning and CV: Gym and sports facilities occupancy detection   **Present**
- Developed a YOLOv7-based deep learning CV solution to detect gym and sports facility occupancy, in collaboration with the university; proposed model for deployment on the Rokwire platform, expected to serve **50,000+ daily users of the Illinois App**.

Multi-Label Text Classification using LLMs   **Jun. 2024**
- Fine-tuned GPT-4 for multi-label text classification, achieving an 85% F1-score by leveraging transfer learning and optimizing the model with One-vs-Rest strategy.

Movie Recommender: Utilizing LLMs and Ensemble Techniques   **Mar. 2024**
- Developed a movie recommendation system employing **BERT** for understanding user preferences through prompt and an ensemble of content, collaborative-filtering, graph-based filtering, and a Deep Neural Network recommender for final recommendation.

On-Campus Retail Store   **Oct. 2023**
Freelance Data Analyst   *Champaign, Il*
- Developed a machine learning model to analyze store-level performance, incorporating variables such as sales, traffic, demographic data, and market share to optimize inventory, reduced stockouts by 80%, resulting in a **25% increase in sales** in the following month.
- Developed an automated reporting workflow in Excel, replacing manual tracking and calculations. Trained workers and supervisors on its use, improving reporting accuracy and saving **15 hours/week**, by streamlining the entire process.

Pneumonia Detection using CNN: *Jan. 2023*
- Implemented a deep learning model using CNN (ChexNET algorithm) that analyses the x-rays of the patient's lungs to detect if the patient is infected with pneumonia.

SKILLS

Programming Languages: Python (Pandas, spaCy, TensorFlow, Huggingface, Generative AI), JavaScript, R
AWS Technologies: EC2, Athena, Glue, RDS, Quicksight, S3, Redshift, Lambda, SageMaker
Tools: MS Excel (Pivot, VLOOKUP), Tableau, Power Bi, Git, Docker
Frameworks/Libraries: Pandas, NumPy, spaCy, PySpark, TensorFlow, Sckit-learn, Transformers, Huggingface
Databases: MySQL, PostgreSQL, Neo4j, MongoDB, Google Big Query