Patil Adarsh Reddy

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EDUCATION

- **Indian Institute of Information Technology Sri City** — Chitthor, India
  Bachelor of Technology - Artificial intelligence and Data science; GPA: 8.9 — Aug 2023 - May 2027

SKILLS SUMMARY

Languages: Python, C, SQL

Frameworks: Scikit Learn, TensorFlow, Keras

Tools: Git

Soft Skills: Event Management, Public Speaking, Time Management, Communication Skills

PROJECTS

- **Employee Attrition Prediction**:
  - Designed a custom neural network model with **Focal Loss** to tackle a severe **1:7 class imbalance**, achieving **90%+ accuracy** while maintaining high precision and F1-scores across both classes.
  - Compared performance against traditional models like XGBoost, Random Forest, and Decision Tree, where the custom model consistently showed enhanced results.
  - Applied **SHAP explainability** and thorough **EDA** to extract feature-level insights and offer actionable, data-backed recommendations for the HR department.

- **Speech Emotion Recognition using CNN**:
  - Developed a **Convolutional Neural Network (CNN)** using Keras to classify emotions from .wav audio files, transforming them into MFCC features and applying padding and normalization for consistent input shape.
  - Achieved **98%** classification accuracy with detailed performance validation using **waveform and MFCC visualizations**.

- **Generating Important and Frequent Subgraphs from Drug Molecules (Ongoing under Dr. Chandra Mohan Dasari)**:
  - Designed and implemented a **Graph Neural Network (GNN)** model to represent drug molecules as graphs and predict interactions between drugs and targets.
  - Applied explainability techniques like **GNNExplainer and SubGraphX** on the trained model to identify and extract the most important subgraphs representing key molecular structures.

VOLUNTEER EXPERIENCE

- **Core Member – AI/ML/DS Domain, GDG (Google Developer Groups)** — Aug 2024 – Apr 2025
  - Designed an ML-based game showcased at the Uthkrishta tech fest hackathon.

- **Core Member – ML/DL Domain, Matrix Club** — Aug 2024 – Apr 2025
  - Led a deep-dive session on **LLM architectures** and evolution, covering transformers, attention mechanisms, and real-world applications.
  - Taught a foundational session on **statistics, probability, and linear algebra**, emphasizing key concepts for robust data-science workflows.

HACKATHONS AND COMPETITIONS

- **Neural Odyssey - Stroke Prediction Hackathon**: Secured **3rd place** out of **26 teams** in an event organized by **EPOCH Club**, involving the development of an **end-to-end stroke prediction model**.