Haripriya Kotapati

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EDUCATION

Sandiego State University August 2025 – in progress
Master of Science, Computer Engineering(Machine Learning) CGPA: 3.54

Osmania University Nov 2021 – April 2025
Bachelor of Engineering, Computer Engineering
Coursework: Operating Systems, Database Systems, Artificial Intelligence, Machine Learning, Computer Networks, Data Structures

WORK EXPERIENCE

E-Cell IIT Hyderabad May – June 2024
Data Science Intern | Hyderabad, India

- Predictive modelling on large scale datasets using Python and Scikit-Learn for regression based analysis.
- Data preprocessing, feature engineering and parameter optimization using Pandas, NumPy and GridSearchCV.
- Model evaluation through cross-validation, RMSE, and R^2 to assess accuracy and generalization performance.

Swecha Organization May–June 2023
Artificial Intelligence Intern | Hyderabad, India

- Machine learning techniques on real-world datasets using Python and Jupyter Notebook, focusing on generating practical insights.
- Data cleaning, preprocessing, and exploratory analysis to convert raw information into structured inputs for model development.
- Integration of AI models with REST APIs and microservices, enabling deployment within larger application systems.

PROJECTS

Navigating Nearby facilities using Augmented Reality

- AR-based Android application built using Unity, ARCore, and Google Maps API to visualize nearby facilities in real time through camera overlays.
- Combined GPS, geolocation services, and 3D spatial mapping to anchor digital markers accurately onto real-world coordinates.
- Location tracking, facility database management, and interface design supporting accurate, interactive navigation.

AI based Sign Language Translator: Human Pose Estimation

- YOLO-based human pose estimation for sign language translation pipeline
- Human pose dataset preprocessing and 18-to-17 key point annotation mapping
- Model efficiency improvement using pruning and FP16 quantization for real-time inference
- GUI-based visualization for side-by-side comparison of baseline and optimized models

Autonomous Driving System

- Design an autonomous driving perception pipeline for lane detection and real-time vehicle and pedestrian detection
- Apply computer vision techniques including color filtering, edge detection, region-of-interest masking, and Hough transforms
- Integrate YOLOv8 for real-time object detection of cars, buses, trucks, bicycles, and pedestrians
- Process multiple driving videos automatically and generate annotated output visualizations

Automatic Speech Recognition

- Speech-to-text system converting spoken language into written text with support for varied accents and pronunciations.
- Application of natural language processing methods for text interpretation and extraction of meaningful insights.
- Utilization of libraries and tools including Speech Recognition, PyAudio, and NLTK for audio handling and processing.

Taxi fare Prediction

- Regression analysis on trip-level data incorporating geospatial, temporal, and distance-based variables for fare estimation.
- Application of exploratory data analysis (EDA) and correlation mapping to identify key cost-influencing factors.
- Performance validation through RMSE, MAE, and residual distribution assessment for error consistency.

Vaccination Status Prediction

- Classification model identifying factors influencing vaccination status using demographic and health attributes.
- Data preprocessing, missing value handling, and feature selection for enhanced model performance and reliability.

RESEARCH WORK

- Research on reinforcement learning for load-aware UAV Wi-Fi association and 3D positioning to improve throughput, fairness, and stability.
- Haripriya, Kotapati. Augmented Reality-Based Navigation for Nearby Facility Exploration: Enhancing Spatial Awareness and User Experience. International Journal of Creative Research Thoughts (IJCRT), 2025.

CERTIFICATIONS

Google Data Analytics | Microsoft Azure Fundamentals | Cyber Security(Cisco Networking Academy) | Smart India Hackathon | Theory of Computation

SKILLS

Python | Java | PyTorch | TensorFlow | Autodesk| Jupyter Notebook | VS Code | Docker | NumPy | Pandas