Tallapalli Uday Krishna

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PROFILE

A determined individual with strong adaptive learning skills and a deep understanding of machine learning concepts, eager to contribute to scalable machine learning applications to help the company achieve its business goals.

EDUCATION

B.Tech., Computer Science and Engineering (Artificial Intelligence) 2021 – 2025 | Kerala, India
Amrita Vishwa Vidyapeetham; *CGPA*: *6.53*

EXPERIENCE

Amrita Centre for Wireless Network and Application 2025/01 – 2025/06
- Customized and deployed CVAT on GCP for VFSS medical annotation with support for large video datasets.
- Integrated Open Policy Agent (OPA) for dynamic, role-based access control.
- Connected GCP Cloud Storage buckets to handle large-scale medical video data efficiently.

Amrita Centre for Wireless Network and Application 2023/03 – 2023/12
- Played a pivotal role in the development of "Machine Learning for drone image analysis and Exploring Metaverse" .
- Optimized aid deployment through aerial analysis by implementing YOLO algorithms and contributed to the processing of thermal images to enhance human identification.
- Expanded skill set by engaging in basic development of AR applications on Unity platform tailored for Halo Lens.

PROJECTS

AI Tutor using LangChain 2024/08 – 2025/01
- AI Tutor is an **AI-driven education platform** was built to make learning more accessible and tailored for students.
- Key features include **AI Tutor** for adaptive support, **AI Quiz** for customized assessments, **Path Planner** for tailored learning paths, **Chat with PDF** for interactive content and career preparation.
- Built using **Ollama, Langchain,** and **Streamlit.**The platform is designed to be **scalable and accessible** in low-resource settings, empowering diverse learners.

TrackMania-using-Evolutionary-Computation
- Developed a Deep Reinforcement Learning Agent for TrackMania 2020: Leveraged state-of-the-art algorithms like Soft Actor-Critic (SAC) and Randomized Ensembled Double Q-Learning (REDQ) to train an autonomous driving agent.
- Implemented Replay Memory for Sample Efficiency: Collected and stored gameplay samples in a replay memory, enabling the agent to learn efficiently from past experiences.
- Optimized Pipeline for Real-Time Gameplay: Designed a system to capture and process game observations (images, speed, etc.) in real-time, creating a robust training setup for dynamic environments.

Human Detection using UAV during Natural Disaster 2023/11 – 2024/01
- Real-time aerial analysis of natural disasters to provide aid to victims using SOTA algorithm like YOLO.
- Processed thermal images for better identification of humans in distress under debris or challenging conditions.

SKILLS

Programming Languages
Python, MySQL

Skills
LangChain, PyTorch, OpenCV, MediaPipe, HTML, CSS, Git, AutoCAD, Blender, Google Cloud Platform (GCP), Open Policy Agent (OPA), Docker

ACHIEVEMENTS

- Won **1st place at the Sustainable Development Ideathon(2024)** with *The Automated Agricultural Machine*, an AI-powered solution for precision crop management, boosting efficiency, sustainability, and farmer support through innovations like disease detection, water monitoring, and AI-driven chatbots.

SOCIAL ACTIVITIES

- Established Blockchain Club under Student Social Responsibility project: Organized campaign, managed candidate selection, and launched with 35 members, promoting community building and trend awareness in security and blockchain development.
- Successfully conducted a workshop on blockchain to raise awareness among students of Amrita Vishwa Vidyapeetham led by Kerala blockchain club and Amrita Blockchain Club.