Nishanth Devabathini

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About

Computer Science student specializing in AI/ML, with hands-on experience delivering end-to-end projects in OCR, NLP, Computer Vision, and multi-agent systems. Skilled in building production-ready solutions with strong problem-solving and technical execution.

Education

Amrita Vishwa Vidyapeetham — Amritapuri Campus
B.Tech in Artificial Intelligence — *2024 – 2028*

- Relevant Coursework: Machine Learning, Deep Learning, DSA

P. Obul Reddy Public School — Hyderabad
Higher Secondary Education — *2012 – 2024*

Skills

Technical Skills: Python, C++, Java, Flask
Soft Skills: Problem Solving, Communication, Leadership, Teamwork
Artificial Intelligence: Machine Learning, Deep Learning, NLP, Computer Vision

Experience

Member, SIG AI — October 2024 – Present
ACM Student Chapter, Amritapuri

- Participated in AI workshops and hackathons to gain hands-on experience with real-world machine learning problems
- Built and optimized machine learning models using PyTorch and scikit-learn on real datasets
- Collaborated with peers to drive AI initiatives and promote knowledge sharing within the community

Projects

Hybrid Course Recommendation System

- Architected and deployed a sophisticated recommendation engine combining collaborative filtering and content-based algorithms to deliver personalized course suggestions
- Implemented matrix factorization techniques and comprehensive feature engineering using Python, Pandas, and Scikit-learn to analyze user behavior patterns and course attributes for enhanced recommendation accuracy

Real-time Pothole Detection & Segmentation System

- Engineered an end-to-end computer vision pipeline leveraging YOLOv11n architecture for real-time pothole detection and semantic segmentation from live video feeds
- Optimized model performance using PyTorch and OpenCV for efficient deployment on resource-constrained edge devices with high-speed processing capabilities

RAG-Enhanced Educational Story Generator

- Developed an intelligent multi-agent content generation system integrating Retrieval-Augmented Generation with educational knowledge bases to produce contextually-aware, personalized learning narratives
- Orchestrated AI agents using CrewAI framework and implemented high-performance vector storage with Qdrant database for enhanced content relevance and student engagement