Cherin Yacoob Wattacheril

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SUMMARY

Aspiring AI/ML engineer with hands-on experience in computer vision, natural language processing, and generative AI applications. Proven track record of building real-time systems, from sign language detection to automated home layout generation, with a strong academic background and research exposure.

EDUCATION

VIT Bhopal University — Oct 2022 – Present
Integrated M.Tech in Artificial Intelligence & Machine Learning — *GPA: 8.72/10*

Marthoma Residential School, Thiruvalla, Kerala — May 2022
12th Standard — *Percentage: 85%*

Sophia International Academy, Nooronmavu, Kerala — May 2020
10th Standard — *Percentage: 89%*

TECHNICAL SKILLS

Languages: Python, C++, Java, Bash

Tools and Frameworks: OpenCV, NumPy, YOLO, Git, Docker, LSTM

PROJECTS

Sign Language Detection — Jan 2024 – Mar 2024
Deep Learning / Real-time Application — *Python, LSTM, MediaPipe*
- Developed a real-time sign language recognition system using LSTM and MediaPipe.
- Achieved 96% real-world prediction accuracy through robust model training and data preprocessing.
- Pioneered a dynamic modeling method focusing on sequential movements for better temporal understanding.
- GitHub Repo

Anomaly Detection in Crowded Environments — Jul 2024 – Apr 2025
Computer Vision, AI Pipeline — *YOLOv8-X, MediaPipe Pose, SlowFast R50*
- Designed a multi-modal AI system for real-time threat detection in public spaces.
- Integrated YOLOv8, MediaPipe Pose, and SlowFast to analyze surveillance video streams.
- Implemented an Interaction-Aware Threat Scoring (IATS) method validated on UCF Crime dataset.
- GitHub Repo

Generative AI for Automated Home Layouts & Floor Planning — Jan 2025 – Apr 2025
NLP, Generative Modeling — *FLAN-T5, CGANs*
- Built a system to generate 2D house plans from text using fine-tuned FLAN-T5.
- Used grid-based layouts and CGANs for fast and condition-based generation.
- Reduced training time by 70% while improving layout coherence.
- GitHub Repo

CERTIFICATIONS

- Applied Machine Learning in Python – Coursera
- Cloud Computing – NPTEL

CO-CURRICULAR ACTIVITIES

- Published in IEEE: Machine Learning-Based Threat Detection in Crowded Environments
- Solved 140+ problems on Leetcode: cherinyacoobwattacheril