RAHUL SARAVANAN

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EDUCATION

PES University **Nov.2022 - May.2026**
Bachelor of Technology in Computer Science and Artificial Intelligence

GPA: 8.70/10.0: Secured **Top 10** placements in multiple hackathons, winning **1st place** in one, and earned prestigious scholarships for academic excellence in AI and software development.
CBSE: 87.6%, PU BOARD: 94%

TECHNICAL SKILLS

Programming - Golang, Python, C/C++, Rust, R, Javascript, SQL
Skills - Docker , Finetuning LLMs, Computer Architecture , Operating systems, System Programming, React Web Development, Golang Backend, Database System
Frameworks - Pytorch, Langchain, Hugging Face,Gymnasium Reinforcement Learning, Low Level Programming, CLI Development
Domains - Machine Learning, Deep Learning, Reinforcement Learning, Computer Vision, Finetuning LLM's, Web Development, Data Analysis

WORK EXPERIENCE

RAPID PES University Bangalore, Karnataka **Jun.2023 - Aug.2023**
Intern
Built a **CNN sign language translation pipeline** using **Pytorch, Mediapipe, Huggingface**, achieving 92.8% accuracy on a dataset of 1,500+ hand gesture images from 5 different signers. Employed MediaPipe for real-time extraction and 3D visualization of 27 hand landmarks, enhancing spatial feature representation for gesture classification.

PROJECTS

Fingerprint Autentication System for Verification Of Valid Voters
Built a Fingerprint Authentication System for Voter Verification, winning a 24-hour hackathon. Constructed a robust fingerprint matching system utilizing the SIFT algorithm, storing and validating 5,000+ fingerprint records in MongoDB for enhanced security protocols with Tkinter GUI

Sign Language Translation From Indian Sign Language to Regional Languages (Text-to-speech) using custom CNN.
Developed a CNN model for deep learning in sign language translation, converting Indian Sign Language to regional languages with text-to-speech output. Implemented a custom CNN architecture enabling real-time communication and improved accessibility.

Training Agents Using Deep Reinforcement Learning Algorithms Across Diverse Game Environments
Engineered custom Reinforcement Learning environments using OpenAI Gymnasium and Stable-Baselines. Utilized DQN and Double DQN (DDQN) algorithms to optimize reward strategies and improve agent performance in complex tasks.

Drowsiness Detection Using Deep Learning with Haar-Cascades Algorithm Project
Implemented object detection using the Haar Cascades algorithm with OpenCV, achieving 90%+ accuracy in real-time. Optimized detection parameters for fast and reliable performance.