Duggireddy Hitesh Pranav Reddy

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EDUCATION

PES University, Bengaluru — **Bengaluru, India**
B.Tech — Electronics & Communication Engineering — 2023 – 2027
GPA: 8.49

Sri Chaitanya College of Education — **Bengaluru, India**
High School Secondary Education — 2011 – 2023
GPA: Completed my schooling with 83.2% in Class 10 and 91.4% in Class 12 (Science). Percentage: 95%

EXPERIENCE

Joy of Engineering Lab (JoEL), PES University — **Bengaluru, India**
Student Head — August 2024 – Present

- Contributed to the backend planning and technical coordination of HackeZee 2025, JoEL's flagship hardware hackathon.
- Assisted in event logistics, participant support, and mentoring, ensuring a smooth experience for all attendees for multiple events
- Mentored 6+ teams on IoT based projects, guiding them through design, implementation, and debugging processes.

Center for Information Security, Forensics and Cyber Resilience (C-ISFCR) — **Bengaluru, India**
Research Intern — June 2025 – July 2025

- Collaborated with a team to develop a modular cybersecurity framework for automotive networks.
- Design and implemented a full-stack intrusion detection system (IDS) using machine learning models.
- Integrated a real-time Python-based firewall with an ensemble of models to enhance vehicular safety.
- Created a Tkinter-based GUI for controlled CAN message injection and post-attack analytics visualization.

RESEARCH & PROJECTS

Automotive ML-based IDS — **2025**
Python, Machine Learning, CAN Bus, Automotive Security

- Developed an intelligent intrusion detection system leveraging machine learning algorithms to monitor and detect anomalous behavior in automotive CAN bus communications.
- Integrated real-time Python-based firewall with ensemble models to enhance vehicular safety.

Motorsport Telemetry Dashboard - Ignition 1.0 — **2024**
Embedded Systems, IoT, Sensor Fusion, JavaScript, Chart.js

- Built a real-time telemetry system integrating IMU acceleration data, GPS-based vehicle tracking, and speed estimation using sensor fusion.
- Recognized as the 2nd lightest hardware system at Ignition 1.0 (sponsored by Ather Energy) and secured 5th place overall.
- Implemented contextual interpretation of driving behavior through acceleration variance analysis.

Official Website – Joy of Engineering Lab (JoEL) — **2025**
Next.js, TypeScript, Tailwind CSS, Vercel

- Designed and developed the official digital presence for JoEL to showcase flagship events like HackeZee and Roadshow.
- Optimized for performance and accessibility, ensuring a structured platform for student projects and initiatives.

SKILLS

Languages: Python, C / C++, Verilog / VHDL
Hardware: FPGA, Arduino/RPi
ML & Security: Scikit-learn, PyTorch, IDS / Anomaly Detection, CAN Bus Security
Tools: Git, Vivado, Linux