ACHYUT HEYGRIV

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SUMMARY

Electronics and Communications Engineering student specializing in embedded systems. Proficient in C/C++ and microcontroller programming with demonstrated experience in building and programming hardware projects from concept to completion. Eager to apply practical skills to a challenging internship in the electronics or automotive sector.

PROJECTS

Project Genesis - Conceptual Innovation Showcase

- Conceptualized and authored a detailed framework for a resourceful innovation initiative, demonstrating strategic thinking and creativity.
- Designed and launched a professional website using B12 to articulate the project's vision, mission, and technical roadmap.
- Showcase Link: https://project-genesis-jiea.b12sites.com

DC Motor Speed & Direction Control

- Engineered a complete embedded system to provide precise wireless control over a DC motor's speed and direction using a standard IR remote.
- Programmed an Arduino UNO microcontroller in C++ to interpret IR signals and actuate an H-Bridge motor driver, achieving a >98% command success rate.
- Successfully integrated all hardware and software components, demonstrating proficiency in circuit design and embedded systems development.

ARES (Autonomous Rover for Environmental Sensing) | Major Project

- **Solely engineered** a complete IoT robotics platform using **Raspberry Pi 2**, integrating a complex sensor array (Dual Ultrasonic, Dual PIR, DHT22) with an L293D motor driver for autonomous obstacle avoidance and directional motion tracking.

- **Developed** a high-performance **multi-threaded Python backend** utilizing **Flask-SocketIO** and **Eventlet**, successfully overcoming hardware latency to achieve **real-time, bi-directional telemetry streaming** and millisecond-level response times.
- **Designed** a responsive "Mission Control" web dashboard using **HTML5, JavaScript, and Tailwind CSS**, enabling seamless remote monitoring and precise "press-and-hold" manual control over a local WiFi network.

SKILLS

- **Languages:** Python, C, C++
- **Hardware & Tools:** Arduino, Microcontrollers, IR Sensors, Motor Drivers
- **Concepts:** Data Analysis, AI Fundamentals, Prompt Engineering (Vertex AI), Embedded Systems

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EDUCATION

Christu Jyothi Institute of Technology and Science | Hyderabad, India

Bachelor of Technology - B.Tech, Electrical, Electronics and Communications Engineering

Expected Graduation: May 2026

Sri Chaitanya College of Education | Hyderabad, India

Intermediate, MPC

Completed: May 2022

CERTIFICATIONS

- **Prompt Design in Vertex AI Skill Badge**
- **Data Analysis Certification** (Internship Studio)
- **GE Aerospace - Explore Engineering Job Simulation**
- **Embedded system with Arduino (**GeeksforGeeks)
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