

# Achyut Heygriv

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## SUMMARY

Electronics & Communications Engineering student specializing in embedded systems and IoT. Proficient in C/C++ and Python with hands-on experience designing and programming hardware from concept to deployment. Looking for challenging opportunities in the electronics, automotive, or robotics sector to leverage skills in real-time telemetry and circuit design.

## EDUCATION

### Christu Jyothi Institute of Technology and Science

B.Tech - Electronics & Communications Engineering

CGPA: 8.2/10

Jangaon, India

Expected: May 2026

### Sri Chaitanya College of Education

Higher Secondary Education (MPC)

Score: 956/1000

Hyderabad, India

May 2022

## TECHNICAL SKILLS

**Languages:** C, C++, Python, HTML5, CSS (Tailwind), JavaScript

**Hardware:** Arduino UNO, Raspberry Pi 2, IR Sensors, L293D/H-Bridge, Ultrasonic/PIR Sensors, DHT22

**Tools & Frameworks:** Flask-SocketIO, Eventlet, Git/GitHub, VS Code, Arduino IDE

**Core Concepts:** Embedded Systems, IoT Telemetry, Data Analysis, AI Fundamentals, Prompt Engineering

## ENGINEERING PROJECTS

### ARES (Autonomous Rover for Environmental Sensing) | IoT, Python, RPi

- Engineered a complete IoT robotics platform utilizing a Raspberry Pi 2, integrating a multi-sensor array (Dual Ultrasonic, Dual PIR, DHT22) with an L293D motor driver for autonomous obstacle avoidance.
- Developed a high-performance, multi-threaded Python backend using Flask-SocketIO and Eventlet, overcoming hardware latency to achieve millisecond-level bi-directional telemetry streaming.
- Designed a responsive "Mission Control" web dashboard using HTML5, JS, and Tailwind CSS, enabling seamless remote monitoring and precise manual control over a local WiFi network.

### Wireless DC Motor Controller | C++, Arduino, Circuit Design

- Engineered an embedded system to provide precise wireless control over a DC motor using an IR remote interface.
- Programmed an Arduino UNO in C++ to interpret incoming IR signals and actuate an H-Bridge motor driver, achieving a greater than 98% command execution success rate.

### Project Genesis - Innovation Showcase | Strategic Planning, Web Design

- Conceptualized an innovation initiative framework and launched a professional web platform using B12 to articulate the technical vision to stakeholders.

## CERTIFICATIONS

Prompt Design in Vertex AI (Google) | Data Analysis (Internship Studio)

Explore Engineering Job Simulation (GE Aerospace) | Embedded System with Arduino (Geeks-forGeeks)