

# YARAJODU SIVA SAI

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## Objective

- Dedicated ECE undergraduate and accomplished chess player, combining technical expertise with honed skills in strategic planning, analytical thinking, and patience, seeking an opportunity to contribute to the development of pioneering electronic solutions in embedded systems, IoT, and web development.

## Education

G Pulla Reddy Engineering College  
Electronics and Communication Engineering – Bachelor's

Kurnool, AP  
2022-Present

## Projects

### SAVVYAGRI NETWORK – An interdisciplinary Python-Based Environmental Monitoring System

- Designed an integrated environmental monitoring system using NodeMCU, tracking vital parameters with enhanced data accuracy. The system features a user-friendly web interface, Telegram bot, and scalable AWS RDS/MySQL database for real-time monitoring. Predictive analytics and machine learning enable crop yield forecasting and personalized recommendations, optimizing agricultural productivity.

### REAL TIME NAVIGATION ASSISTANT(RTNA) FOR VISUALLY IMPAIRED

- Developed an assistive device using the ESP32-CAM and Google API to provide real-time obstacle detection and navigation for visually impaired individuals. The system captures and processes visual data, converting detected objects into spoken instructions, which are delivered through a speaker amplified by an I2S module. This IoT-based solution offers hands-free guidance, enhancing user safety and independence in navigating their surroundings.

### Custom ESP32 PCB Design using KiCad

- Designed a custom PCB for the ESP32 module using KiCad, focusing on optimizing layout, power distribution, and signal integrity. Developed and verified schematic and Gerber files, adhering to PCB design standards.

## Skills

Programming languages - Embedded C, CPP, Python  
Tools - Git, VS Code, PyCharm, Arduino IDE, KiCad, Eagle PCB Design(Software)  
Operating System - Linux(Basics)

## Achievements

- Finalist, IEEE YESIST 2024: Recognized among top innovators in the prestigious international competition.
- Awarded a cash prize for outstanding project presentation at a regional Project Expo, showcasing technical expertise and innovative thinking

## Hobbies

- Chess Player, DIY projects