SUDEEP MULLAGURI

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SKILLS

- **Languages**: Python, C,C++, assembly language, Verilog.
- **Microcontrollers**: Arduino, ESP32,8051MC, ESP32.
- **Platforms**: AutoCAD, Creo, MATLAB, Keil, Cisco Packet tracer, NC-SIM,EasyEDA, Fusion360
- **Soft Skills**: Leadership, Team Player, Problem solving, Adaptability, Project management.
- **Circuit designing**: Tinker cad, wokwi, Proteus, PSpice, Cadence.

TRAINING

Next-Gen Computer Networking: May'25 –July'25

• Gained hands-on experience with advanced networking concepts including VLANs, inter-VLAN routing, and network security.

- Worked with Cisco Packet Tracer to design, configure, and simulate modern enterprise networks.
- Learned and applied protocols such as DHCP, STP, and OSPF to optimize network performance and scalability.
- Built a solid foundation in next-generation networking concepts with practical exposure to real-world applications.

PROJECTS

Gesture-Controlled Bot using Computer Vision March'25

- Built a real-time gesture-controlled robot using a laptop webcam and computer vision techniques.
- Implemented hand gesture recognition using **MediaPipe** and **OpenCV** in Python.
- Converted recognized hand gestures into movement commands such as forward, left, right, and stop.
- Transmitted control commands wirelessly from the laptop to **ESP32 over Wi-Fi.**
- Programmed the ESP32 to receive commands and control motors for smooth robot movement

NanoDrive 0.1 – Custom ESP Pico D4 Development Board & PCB Design October'24

- Designed and fabricated a custom development board based on the ESP Pico D4.
- Optimized PCB layout for stability, modularity, and maker-focused use cases**.**
- Enabled robotics and IoT prototyping with reduced form factor and cost**.**

Ai-Enabled Smart Irrigation System December'24

- Designed an AI-based smart irrigation system to calculate precise crop water requirements automatically.
- Implemented a **bias correction model** to improve accuracy of weather data for irrigation decisions.
- Used **hyper-localized weather parameters** along with soil moisture data for intelligent water estimation.
- Integrated sensors and microcontroller to automate pump control based on calculated water needs.
- Optimized irrigation scheduling to reduce water wastage and improve crop efficiency.

CERTIFICATES

- Next-Gen Computer Networking (LPU) July'25
- Introduction to Python Course (Scalar) April'24

ACHIEVEMENTS

• Designed and developed NanoDrive 0.1, a custom ESP Pico D4-based dev board.

• Built multiple IoT prototypes (Smart Irrigation, Water Quality Tester).

EDUCATION

Lovely Professional University — Punjab,India

Bachelor of Technology -Electronics and communication Engineering — Aug' 23-Present

Narayana jr college — AP, India

Intermediate; **Percentage:97%** — Apr'21 – Mar'23

Narayana EM School — AP,India

Matriculation; **Percentage:97** — Apr'20 – Mar'21