Ankur Vadlamani

+91 6304281589 | ankurvadlamani@gmail.com | in/ankur-vadlamani | ankurvadlamani

Education

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Mahindra University *Hyderabad, India*

B.Tech. in Electronics & Computer Engineering *July 2022 – Present*

– CGPA: 7.27 / 10.0 *Class Rank: Top 10%*

– Relevant Coursework:

Computer Systems Architecture	Programmable Devices	Operating Systems
Data Structures & Algorithms	Analog & Digital Circuits	Digital System Design
Machine Learning with Python	Advanced VLSI Design	Optoelectronic Devices

Skills

- **Languages**: C, Python, Perl, Linux Shell Scripting, SQL
- **Hardware/EDA Tools**: Cadence Virtuoso, LTSpice, EasyEDA, VCS Simulator, GNU Radio, MatLab
- **Developer Tools**: Git/GitHub, Docker, Linux CLI, VS Code, Arduino IDE
- **Microcontrollers**: RP2040, Arduino (Mega, Uno), Raspberry Pi, NVIDIA Jetson Nano

Projects

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Precision Dispensing System and Segregation Nov 2024

– Finalist in Lam Research Challenge 2024 (Top 25/600+ teams) at IISc Bangalore.

– Engineered a closed-loop dispensing system with a peristaltic pump and HX711 load cell, achieving consistent ±0.5g accuracy for automated liquid handling.

– Programmed control logic in MicroPython on an RP2040, featuring a real-time weight display on an SSD1306 OLED screen via the I^2C protocol.

– Designed and fabricated a custom PCB using EasyEDA to integrate all components into a robust hardware system. [**GitHub**]

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Autonomous Underwater Vehicle (AUV) August 2024 – March 2025

– *Guided by: Dr. Sebastian Uppapalli & Dr. Gopinath G.R.*

– Finalist at SAUVC 2025 (Top 15/45+ international teams), hosted by IEEE OES Singapore & NUS.

– Designed the AUV's main power distribution board, incorporating relays for safe power management for thrusters and an NVIDIA Jetson Xavier.

– Developed a custom Raspberry Pi Pico shield on a PCB to reliably interface sensors (MPU9250 IMU, Bar02 pressure sensor) with the primary compute module.

– Integrated and calibrated sensor systems to provide accurate telemetry data for autonomous navigation tasks.

Experience

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SDR Intern *Hyderabad, India*

Defence Research and Development Laboratory (DRDL) *July 2024 – Aug. 2024*

– Contributed to the development of a secure UAV transceiver within the AI division, focusing on robust communication protocols.

– Implemented and tested Frequency Modulation (FM) communication links between devices using a PlutoSDR, successfully demonstrating real-time data transmission.

– Adhered to and applied military-grade standards (MIL-STD) for system design, documentation, and testing procedures.

Achievements

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Merit Scholarship for Academic Excellence 2023

– Awarded a scholarship of ₹1,00,000 for the academic year 2023–2024 in recognition of outstanding academic performance.