Paresh Dhok

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Education

MIT World Peace University — PUNE, IN
B.Tech in Electronics and Communication Engineering with AIML — *Aug. 2023 – May 2027*

Gurukul Public School & Junior College Of Science — AMRAVATI, IN
Higher Secondary Certificate — *Aug. 2020 – June 2022*

Raisaheb Moti Sangai English School — AMRAVATI, IN
Secondary School Certificate — *June. 2019 – April 2020*

Position Of Responsibility

Vice President and Founder — February 2025 – Present
Student Club - prismlabs MIT-WPU — *PUNE, IN*

- Led the club's expansion, Participating hackathons, technical workshops, and hands-on training for students in AI/ML, IoT, and Embedded Systems
- Pioneered recruitment and branding, growing the club's presence through strategic marketing campaigns, workshops, and hackathons

SY Coordinator — July 2024 – Present
Student Club - InsightAI MIT-WPU — *PUNE, IN*

- Facilitate collaborations between Insight AI and other technical clubs, expanding opportunities for AI/ML enthusiasts
- Coordinating club activities in overall second year students

Student Volunteer — August 2023
Social Leadership Developement Program - SLDP MITWPU — *PUNE, IN*

- Ensured smooth execution of events by maintaining discipline and coordination among participants.
- Assisted in managing crowd control, event flow, and participant engagement during leadership sessions

Achievements

- First Prize in PBL Project Competition at MIT-WPU in First Year
- Appreciation Prize in HackMITWPU25 Hackathon (Ideathon Track)

Projects

Home Automation System | *Embedded C* — September 2023 – November 2023

- Designed and developed a home automation system with mobile-controlled operations for convenience by ESP8266
- Implemented automatic garage gate control using a Wi-Fi-based system for seamless entry and exit

MoodE | *Python, Embedded C, Tensorflow, OpenCV* — February 2024 – Present

- Developed an AI-driven system that adapts room ambiance based on the user's mood, including music, lighting
- Integrated Arduino and IoT components to control smart lights, speakers, and aroma diffusers also used intel OpenVino.

JARVIS | *Python, Embedded C, Google TTS Framework* — March 2024 – April 2024

- Build an offline voice controlled system to operate home automation devices without needind internet.
- Developed an custom voice control system that allow user to modify the voice commands for each action.

Scout Rover | *Python, Embedded C, MATLAB* — September 2024 – November 2024

- Designed a wireless control system to operate the Scout Rover using a gamepad variable speed control and directional movement for precise navigation.
- Integrated ultrasonic sensors, IR sensors, and MPU6050 for obstacle avoidance and motion stability with gas and temperature sensors also integrated a LiDAR sensor to scan the surroundings and generate 2D maps in MATLAB.

Signal Generator | *Python, Plotly, Flask, scikitlearn, dash* — January 2025 – Present

- Designed a signal generation system to visualize and analyze different modulation techniques in real time.
- Implemented AM (DSBSC, DSBFC, SSB), FM and PM Python for visualization.

Technical Skills

Languages: Python, C/C++, HTML, Embedded C, Java, Machine Level Programming
Hardware Embedded Systems: ESP32, Arduino, Raspberry Pi, STM32, 8051, Lidar, Sensors Actuators, Motor Drivers, RF Bluetooth Modules
Frameworks & Platforms: Flask, WordPress, Arduino, OpenVino, TinkerCad, MultiSim
Circuit Design Electronics:: Analog Digital Circuit Design, Signal Processing, Microcontroller
Developer Tools: Matlab, Simullink, VS Code, PyCharm,Proteus
Libraries & SDK's: NumPy, pandas, Matplotlib, OpenCV, scikit-learn, TensorFlow, Keras, ADB shell, PYQT5, Plotly, Dash, Tenserflow, ADB