



EDUCATION

MIT World Peace University

Diploma in ECE Ai&ML
2024

Saraswati Vdyalaya Union

Board of Secondary Education (SSC)
2021

SKILLS

- **Programming Languages:** C, C++, Python.
- **Operating Systems & Tools:** Linux, Git, ROS2, Gazebo, Rviz.
- **Frameworks:** ros2_control, Nav2.
- **Automation and Containerization:** Docker, Ansible, Github Actions.
- **Embedded:** STM32, TM4C, and their peripherals(CAN, PWM, etc).
- **Designing:** Canva, Adobe Premium Pro, WordPress.

PROJECTS

- Designed and built an autonomous robot using ROS2.
- Trained a machine learning computer vision (CV) model for ball detection and tracking.
- Developed and implemented a ball-following algorithm for real-time navigation.
- Developed an automated attendance system using face detection.

EXPERIENCE

ROS2 developer MTT(ROBOCON)

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- Gained expertise in ROS2, developing and deploying autonomous robotic systems.
- Built an automated robot using ROS2, integrating real-time navigation and control features.
- Combined ROS2 with computer vision (CV) algorithms to enable object detection and dynamic object-following capabilities.

Team Member MTT(ROBOCON)

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- Gained hands-on experience with embedded systems, learning about hardware-software integration.
- Designed, coded, and developed a manual robot with integrated embedded system controls.
- Built an automated robot capable of following predefined paths using odometry and distance sensors.
- Gained practical experience in computer vision, focusing on object detection, tracking, and image processing techniques.

Arduino Basics Workshop - Instructor

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- Conducted a hands-on workshop covering the fundamentals of Arduino programming and hardware.
- Guided participants through building basic circuits and programming simple projects using the Arduino platform.

ACHIEVEMENTS

MITWPU

- **AIR 3** in DD Robocon 2024 (National Level Robotics Competition).
- **AIR 2** in DD Robocon 2023 (National Level Robotics Competition).
- **First Rank** in First Year Diploma, Electronics and Communication Engineering (ECE).