

PAVIT SINGH NARANG

ROBOTICS ENGINEER

 GitHub |  LinkedIn |  Website |  pavitnarang14@gmail.com |  +918889799949

EDUCATION

B.Tech

Nov 2020 - Jun 2024

Electronics and Communication at Acropolis Institute Of Technology
(GPA: 8.29/10.0)

EXPERIENCE

Robotics Engineer Intern, Void Robotics

Jan 2024 - Jun 2024

Skills: ROS2, Gazebo Simulators, RViz, Ngrok, Nvidia Jetson Orin, Python, C++

- Developed SLAM, ekf.global, ekf.local, and navsat transform systems to optimize odometry visualization in RVIZ; resulted in a 20% improvement in navigation performance
- a Python script on Nvidia Jetson Orin to update ClickUp tasks with Ngrok URL, integrating tunneling, API responses, and SSH domain conversion, saving the team 10+ hours weekly
- Constructed Dockerfile for Nvidia Jetson Orin, including ZED Camera SDK, ZED components, and ROS2 Humble with l4t 35.4.1 Ros base image, reducing the size by 10%.

AI Intern, AICTE & IBM SkillsBuild

Jun 2023 - Jul 2023

Skills: Deep Learning Model, CNN, Image Recognition ,Pytorch ,Tensorflow

- Applied TinyVGG and FashionMNISTModelV0 for custom datasets, boosting fashion accessories detection accuracy by 10%.
- Employed torchvision models for tasks like pizza and steak classification, resulting in a 20% reduction in misclassification rates.

EV Engineer Intern, ESLA Transtech Private Limited

Aug 2022 - Mar 2023

Skills: CAN Communication, AUTOSAR , AIS Rules Study for M4 Category

- Designed logic diagrams, circuit diagrams, and wiring diagrams, enhancing mission success rates by 15%.
- Implemented CAN Communication for data exchange between ECUs, improving data transmission reliability by 25%.
- Incorporated AUTOSAR for making the application layer for the ECUs, resulting in a 30% increase in system integration efficiency.

Robotics Engineer Intern, APSIS Solutions by InMovidu

Apr 2021 - May 2021

Skills: Raspberry Pi, Arduino , C++ , Python

- Engineered 10+ innovative projects utilizing Raspberry Pi and Arduino, using a hands-on project-based learning approach.
- Designed a Health Monitoring System with oxygen, BPM, and ECG measurements, utilizing a LoRa module to transmit data to a Raspberry Pi, increasing coverage area by 20% without internet.

ACHIEVEMENTS

- **Second Runner Up** in Flipkart Grid 5.0 Robotics Challenge (Project Hackathon) in 2023
- **Winner of IOT Competition 2023** in which 100 Students participated, organized by Acropolis Institute of Technology and Research.

SKILLS

Experienced: ROS2 , C++ , Linux , Python, RViz , Gazebo Simulator , CAN , SPI & I2C
Intermediate: MoveIt , SLAM, Machine Learning , Deep Learning , Git, Github , Pytorch, PLC
Hardware: Raspberry Pi , Arduino , Nvidia Jetson Orin
PLC Software: Simantic S7 Step7, Mitsubishi FX-TRN-BEG-E , RSLogix500
Designing: Solidworks , Creo Parametric , Fusion 360
Familiar: MongoDB, Express.js, React.js, Node.js

PROJECTS

Object Size Detection Jun 2024 - Jun 2024

Domain: Automation ,**Technology:** Mitsubishi FX , Simatic S7 , PLC

- Developed a box size identification system using sensors to detect height on a conveyor belt and activate lamps for size classification, improving efficiency by 35%

Military Robotic Arm Mar 2024 - Present

Domain: Robotics ,**Technology:** Solidworks, Gazebo Simulator , ROS2

- A cutting-edge Autonomous Combat Arm, armed with a precision rifle and employing Advanced Computer Vision for target acquisition, expected to improve target accuracy by 40%. In the design phase

Autonomous Vehicle Dec 2023 - Present

Domain: Robotics ,**Technology:** Solidworks, Gazebo Simulator, Computer Vision

- Employs sensors, including Lidar, for obstacle and human detection on a predetermined route, improving detection efficiency by 20% based on real-time data

Singulation Automation Machine (SAM) Aug 2023 - Jan 2024

Domain: Robotics ,**Technology:** Creo, Python , Mqtt , Raspberry Pi

- An ingenious box-picking automation machine utilizing singulation techniques for the Flipkart Grid 5.0 Robotics Challenge, advancing to the final round.

C.H.A.R.M Jul 2023 - Mar 2024

Domain: Robotics ,**Technology:** Creo , Python , ML , NLP , Raspberry Pi

- A sophisticated humanoid robot featuring hardware-based artificial intelligence, integrating an NLP-based chatbot for enhanced interaction, increasing user engagement by 30%

Traffic Robot Jan 2023 - Feb 2023

Domain: Robotics ,**Technology:** Arduino , ESP32

- An Automated traffic regulation robot deployed for Madhya Pradesh Police for managing local traffic, improving traffic flow efficiency by 20%

CERTIFICATE

- [Flipkart Grid 5.0 Robotics Challenge Finalist Certificate](#)
- [Robotics Internship Training Certificate by APSIS Solutions](#)
- [Sensors Study Certificate by University of Colorado](#)