PAVIT SINGH NARANG

ROBOTICS ENGINEER

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EDUCATION

B.Tech   Nov 2020 - Jun 2024

Electronics and Communication at Acropolis Institute Of Technology
(GPA: 8.28/10.0)

EXPERIENCE

Robotics Engineer Intern, Void Robotics   Jan 2024 - Jun 2024

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

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

AI Intern, AICTE & IBM SkillsBuild   Jun 2023 - Jul 2023

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

- Understood the process for Deep Neural Network Image Classification
- Used TinyVGG and FashionMNISTModelV0 for custom datasets and fashion accessories detection.
- Utilized torchvision models for tasks like pizza and steak classification.

EV Engineer Intern, ESLA Transtech Private Limited   Aug 2022 - Mar 2023

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

- Benchmarking for various ECU for vehicle.
- Creating Logic diagrams, circuit diagrams, wiring diagrams.
- Tesing using CAN Communication for sending and receiving data from one ECU to another ECU.
- Worked on AUTOSAR for making the application layer for the ECUs.

Head of Technocrats Club, Acropolis Institute of Technology   Feb 2022 - Jun 2024

Skills: Soft Skills, Content Creation , Teaching Skills , Student Engagement

- Developed and delivered 100+ hours of lectures, quizzes, assignments, and 20+ projects on Electronics, Robotics, Computer Vision, Machine Learning, Raspberry Pi and Web Development, teaching 200+ students of various domains.

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, leveraging dynamic project-based learning methodology
- Crafted a range of projects including an Automated Parking System and Health Monitoring System
- Designed a Health Monitoring System measuring oxygen levels, BPM, and ECG. This compact kit transmits data to a Raspberry Pi via a LoRa module with an Arduino Nano controller.

Skills

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

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.

Projects

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. 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, enabling informed decision-making 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.

Portfolio Website   Mar 2023 - Mar 2023

Domain: Web Development ,**Technology:** React.js, Node.js

- Successfully generated 50+ engagements, showcasing comprehensive skills and achievements effectively on the live personal portfolio.

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

Certificate

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