PRIYADARSHAN SABARIKANNAN

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EDUCATION

New York University **New York, NY**
Master of Science in Mechatronics, Robotics, and Automation May 2025
Karunya University **Coimbatore, IN**
Bachelor of Technology in Robotics and Automation May 2023

TECHNICAL SKILLS

- Programming Languages: Python, PLC Programming - Ladder Logic.
- Automation Systems: Siemens STEP7 TIA Portal, Ignition SCADA Systems.
- Libraries/ Frameworks: Keras, Pytorch, Scikit-Learn, NumPy, SciPy, Git, TensorFlow, Pandas.
- Software: MATLAB, SOLIDWORKS, AutoCAD.

WORK EXPERIENCE

Graduate Assistant (New York University) **Sep 2024 – Present**

- Lead designer for CSAW 2024, overseeing and executing all design elements to enhance the event's visual and functional impact.
- Utilized strong team management skills to guide a group of assistants, setting clear objectives and fostering a productive, collaborative environment.
- Demonstrated effective collaboration by coordinating with faculty, staff, and team members, integrating feedback to align design solutions with event goals.
- Applied excellent communication skills to present design concepts, facilitate discussions, and ensure cohesive teamwork and problem-solving skills.

Robotics Program Intern (Kodacy) **Aug 2022 - Aug 2022**

- Developed and implemented algorithms for robots, like obstacle avoidance, line following, and ultrasonic object detection, resulting in a 70% reduction in collision incidents during testing phases. Addressed the need for improved autonomous robot performance. Handled circuit design for the robots.
- Enhanced overall robot performance and versatility by successfully integrating, troubleshooting, and calibrating various hardware components, including LEDs, sensors, and microcontrollers.
- Created comprehensive documentation for programming methodologies, simulation procedures, and hardware integration steps.

Python Programming Intern (Cisco Networking Academy) **Apr 2022 – Jul 2022**

- Analyzed and verified the integrity of IP address translations, utilizing automated scripts and manual inspections; identified and resolved 90% of invalid translations, enhancing network security and reliability.
- Streamlined network security by identifying and resolving IP address translation issues, reducing potential coding issues at early stages by 50%, and enhancing reliability in a fast-paced environment.
- Resolved critical issues, fortified network security ensured reliable connectivity, and minimized project disruptions by 40%.

PROJECTS

Automated object retrieval mobile robot **Apr 2024- May 2024**

- Developed a mobile robot that is capable of identifying and retrieving color cubes placed on an arena, based on color detection. By integrating computer vision and robotic manipulation, the system will detect the position of both the arena and the target object, instructing the robot to navigate, grip, and relocate the object to a designated area based on its color using a PID control.

Color cube sorting Robotic Arm **Mar 2024– Mar 2024**

- Modeled a 4-DOF Robotic arm which sorts the cube in the conveyor belt using the color sensor and the gripper in the robotic manipulator picks and places the cube on the respective color positions.

PNP Robotic arm **Feb 2024- Feb 2024**

- Designed a versatile 4-DOF robotic arm with a gripper driven by SG90 servo motors as an actuator for precise control. Featuring two programming options: a puppet arm with potentiometers for quick positioning. With a capacity to store 10 positions, it smoothly transits between presets and enables reprogramming. Users can also manually select and navigate positions.

Smart Door Lock System **Sep 2023-Dec 2023**

- Developed a seamless door lock system that removes the conventional key and uses smart security features like RFID and a keypad feature that encrypts a 6-digit numeric passcode. It can add, edit, and block the user using a master user ID and save more than 1000 users into the database system for access.
- Collaborated additional feature of a burglar alarm for alerts in case of a trespass or breakage of the system.

Air Purification Robot **Jan2023-Apr 2023**

- Conceptualized and modeled an innovative IoT-based air purification robot to detect and eliminate air pollutants, contributing to environmental sustainability. Successfully reduced the Air Quality Index (AQI) from 100 to 20 by integrating a high-efficiency HEPA filter, showcasing a commitment to creating tangible solutions for air quality improvement.

CERTIFICATION

SIEMENS TIA Portal STEP7