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**
- Spearheaded the design and execution of the Chips4All program website, driving a 30% increase in user engagement by introducing responsive features and refining intuitive layouts.
- Orchestrated the branding, creation of promotional assets, and digital materials for CSAW 2024, boosting attendee participation by 30%. Engineered an interactive website for CSAW, ensuring flawless functionality.

Robotics Program Intern (*Kodacy*) — **Aug 2022 - Aug 2022**
- Deployed obstacle avoidance, line-following, and object detection algorithms, reducing collision incidents by 70% during testing.
- Designed and integrated circuits with hardware components, elevating task execution speed by 20% and enhancing the robot's ability to adjust to diverse operational requirements.
- Authored detailed programming guides and simulation protocols, accelerating replication processes and improving operational efficiency.

Python Programming Intern (*Cisco Networking Academy*) — **Apr 2022 – Jul 2022**
- Analyzed and resolved IP address translation issues, bolstering network reliability and decreasing invalid translations by 90%.
- Strengthened network security by addressing vulnerabilities early, cutting coding-related errors by 50%. Improved project continuity by resolving critical connectivity issues, and minimizing disruptions by 40%.

PROJECTS

Socially Aware Medi-Assist Robotic System (*Github Link*) — **Sep 2024 - Present**
- Constructed a manually controlled robotic platform equipped with IMU, GPS, and tachometer, achieving navigation accuracy within 5 cm in hospital environments.
- Optimized hardware calibration, including webcams, microphones, and sensors, achieving 95% operational stability; pioneered autonomous navigation plans with advanced path planning and obstacle detection, aiming for a 20% boost in healthcare efficiency.

Automated object retrieval mobile robot (*Github Link*) — **Apr 2024- May 2024**
- Engineered a mobile robot capable of identifying and retrieving color cubes with a 98% detection accuracy in a controlled arena environment.
- Leveraged computer vision and PID control to achieve precise navigation and gripping, shortening retrieval time by 30% compared to manual methods.

Color cube sorting Robotic Arm (*Github Link*) — **Mar 2024– Mar 2024**
- Conceptualized an autonomous sorting system with a 4DOF robotic arm and conveyor belt for real-time color-based cube classification and sorting.
- Utilized TensorFlow-trained neural networks, achieving 98% accuracy in RGB-based color classification, and optimized hardware components to improve system response time by 25%, ensuring seamless operation.

PNP Robotic arm (*Github Link*) — **Feb 2024- Feb 2024**
- Built a 4-DOF robotic arm with a gripper for multi-purpose functionality, delivering precise control via SG90 servo motors.
- Integrated features for storing up to 10 positions, ensuring smooth transitions with a 95% accuracy rate, and enhancing usability for repetitive tasks.

Smart Door Lock System *(Github Link)* — **Sep 2023-Dec 2023**
- Designed a smart door lock system incorporating RFID and a 6-digit keypad, capable of securely managing access for over 1,000 users.
- Integrated a burglar alarm system, reducing unauthorized access incidents by 50% during testing.

Air Purification Robot *(Github Link)* — **Jan 2023-May 2023**
- Innovated an IoT-based air purification robot capable of reducing the Air Quality Index (AQI) from 100 to 20 in a 20 sq. meter area, demonstrating an 80% improvement in air quality within 15 minutes of operation.
- Integrated a high-efficiency HEPA filter, lowering the Air Quality Index (AQI) from 100 to 20, demonstrating measurable environmental improvement.