ANISH BHARADWAJ RAMAN

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EDUCATION

University Of Delaware   *Newark, DE*
Master of Science in Robotics   *August 2023 - May 2025**
SRM Institute Of Science And Technology   *Chennai, India*
Bachelor of Technology in Mechatronics   *July 2017 - May 2021*

SKILL

Programming Languages :	Python, C/C++, PLC Programming
Data Analysis :	Jupyter Notebook, Google Colab, Matlab
Simulation :	Kuka.Sim, Yaskawa Motosim, RoboDK, Fluidsim, EasyEda, Simulink
Design & CAD :	Autodesk, Solidworks, Onshape
Hardware & Prototyping :	3D Printing, Arduino
Tools & Software :	MS Office, ERP(Enterprise Resource Planning),KUKA Sunrise Workbench,Git
Certifications :	Industrial Robotics and Automation, Embedded Robotics, Industry 4.0
Industrial Machinery :	Yaskawa, KUKA, Universal Robots, Fronius, Lorch, Esab, Bodor

EXPERIENCE

University Of Delaware   *Newark, DE*
Graduate Research Assistant   *July 2024 - Present*

• Designed and implemented a robotic system for Automated Fiber Placement (AFP) using the KUKA LBR iiwa robot.

• Prototyped and validated a precision end effector for fibre tape placement.

• Utilized MATLAB and RoboDK to develop trajectories for robotic motion planning and perform system simulations.

• Resolved synchronisation challenges, ensuring seamless operation of the robot and tape head.

K-LITE Industries   *Chennai, India*
Robotics Engineer   *July 2021 - July 2023*

• Engineered and integrated robotic systems, including 6-axis robots, cobots, and custom industrial machines.

• Developed test protocols and commissioning routines for system validation and debugging.

• Reduced system downtime by 10% by developing modular and reusable jigs and fixtures.

• Directed production strategies and evaluated outcomes using ERP, ensuring seamless and efficient operations.

• Maintained system documentation and established traceability for troubleshooting and upgrades.

• Spearheaded collaboration with the New Product Development team, introducing pioneering solutions.

Axis Global Automation   *Chennai, India*
Robotics Trainee   *January 2021 - May 2021*

• Programmed 6-axis Robots to automate tasks, improving efficiency and accuracy.

• Provided installation support and commissioning, ensuring 100% client satisfaction and integration of automation systems.

• Collaborated with the manufacturing team to develop custom automation solutions, enhancing production throughput.

• Applied root-cause analysis to identify and resolve system failures effectively.

PROJECTS

Kinematic Analysis and Trajectory Generation for a Robotic Manipulator.

• Developed and implemented a vision-based localisation system, leveraging Aruco markers for precise target detection and alignment.

Autonomous Firefighting Rescue Bot.

• Designed a robot capable of navigating complex environments to detect buildings on fire.

Hexapod Gait Design.

• Developed a robotic hexapod and programmed its gaits for movement control.

Prototyping and simulation of Continuum Robot.

• Designed a flexible robot for navigating confined spaces, inspired by biological systems.

Embedded Mobile Robotics.

• Developed an autonomous mobile robot with embedded systems for navigation and obstacle avoidance.

Colour and Shape Sorting Using a Vision System.

• Developed an automated system using vision technology for sorting objects based on shape and colour

INVOLVEMENT

• MEGA - Mechanical Engineering Graduate Association, University Of Delaware, Newark, DE

• RGSO - Robotics Graduate Student Organisation, University Of Delaware, Newark, DE