Divya Bengali

Robotics System Lab Research Assistant | divyabengali.dev
https://www.linkedin.com/in/divyabengali | *https://github.com/divyabfalcon/scu-course-projects*

Robotics researcher and M.S. student in Robotics and Automation at Santa Clara University, with a B.S. in Computer Science and Engineering and experience in robotics, software development, embedded systems, and spacecraft mission operations. Currently developing remote-control capabilities for a COMAU Racer 5 robotic arm in the SCU Robotic Systems Lab using Python, ROS 2, RoboDK, MQTT, and web-based systems, with robust joint-space control implemented and Cartesian control functional with ongoing edge-case refinement. Previous experience includes NASA ACS3 spacecraft mission operations as a named co-recipient of a NASA Ames Honor Award. Interested in space systems, autonomous systems, robotics software, field robotics, and practical engineering applications.

Education

Santa Clara University Sep 2026 - Jun 2028
Master of Science - MS Robotics and Automation

Santa Clara University Sep 2022 - Jun 2026
Bachelor of Science - BS Computer Science and Engineering
Minor: Management Information Systems - Leavey School of Business

Research Experience

Robotics System Lab Research Assistant Apr 2023 - Present
SCU Robotic Systems Lab | Santa Clara, California, United States

- Develop and refine the web interface, MQTT/API communication, and Python lab-side control agent for a COMAU Racer 5 remote-control system, publishing joint-space and Cartesian commands through ROS 2 to an existing RoboDK bridge.
- Collaborate on ROS training development for a physical MyCobot robot, testing procedures on hardware and contributing to technical content and documentation.
- Supported an Ohlone College MESA summer intern working on ROS 2 control of a 6-DOF robot arm, with the work connected to the COMAU robotic project.
- Contributed to development of the next-generation MANTARAY Vertical Profiler, leading GPS-based autonomous navigation development and developing the mission-planning GUI on top of shared Arduino code for waypoint configuration, telemetry monitoring, mission control, calibration management, and data download.
- Supported NASA ACS3 mission operations from SCU's mission operations room, initially performing manual antenna/satellite pointing and later monitoring automated tracking for safe contact execution in coordination with the broader mission team.
- Prototyped data collection software using COSMOS and MATLAB for research data acquisition workflows.
- Contributed to development of the Vertical Profiler, an underwater robot using pressure, depth, and temperature sensing for environmental data collection at user-defined depths.

Work Experience

Student Assistant - Undergraduate Admissions Jun 2025 - Sep 2025
Santa Clara University | Santa Clara, California, United States

- Engaged with prospective students and families through 34 student panels, addressing inquiries about Santa Clara University.
- Conducted 34 informative campus tours, with an average of 20 people per tour and occasional larger groups, enhancing visitor experience and showcasing university facilities.
- Assisted in data management using Slate and Microsoft Office tools, ensuring accurate records and follow up for admissions processes.

Core Skills

- **Programming Languages:** C++, Python, Java, Swift
- **Robotics & Simulation:** ROS 2, RoboDK, MATLAB/Simulink, Robotic Systems Integration, Remote Robot Control
- **Engineering Tools:** MQTT, Docker, Arduino, COSMOS, Git/GitHub
- **Software & Systems:** GUI Development, Web/API Development, Data Acquisition, Embedded Systems, ESD-Safe Handling

Awards & Certifications

NASA Ames Honor Award, Co-Recipient — 2025

Named a co-recipient of a 2025 NASA Ames Honor Award given to the NASA ACS3 Mission Operation and Engineering Team for exceptional performance, dedication, perseverance, and teamwork supporting the successful deployment of the Solar Sail.

Space & Defense ESD User/Operator Training (Issued Aug 2025 · Expires Aug 2027)
RMV Technology Group LLC, a NASA Industry Partner

"Best Use of Technology" at the NASA International Space Apps Challenge Hackathon in Seattle
NASA International Space Apps Challenge