



Saivinay Manda

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ABOUT ME

I thrive in collaborative environments, often leading teams to successful project outcomes. My approach emphasizes safety, reliability, and creativity in problem-solving. Continuously learning and seeking hands-on experiences, I'm dedicated to contributing to the advancement of robotics and technology. I enjoy challenging projects that push the boundaries of innovation and technology.

WORK EXPERIENCE

Thesis- Context-aware verifiable and adaptive dynamic deliberation

Italian Institute of Technology (IIT), AI LAB Unige [18/03/2024 – Current]

City: Genoa | Country: Italy

1. Framework Testing: Tested ROSMonitoring, a runtime monitoring framework for ROS systems, integrating RML and a Prolog-based oracle. Currently preparing to extend testing to ROS 2.
2. Technologies Utilized: Used Python, ROS, ROS 2, Ubuntu, and Docker. Leveraged NVIDIA Container Toolkit to create efficient, GPU-accelerated Docker containers.
3. Future Development: Planning to develop and improve safety strategies, including human-robot interaction, in future work. Experimental Execution and Future Implementation: Experiments are planned to be conducted at IIT, adhering to detailed instructions for comprehensive testing and validation of the monitoring framework. The framework will be implemented on IIT R1 robot in the future as part of the RobMoSys initiative, an EU project aimed at enhancing robotics software development.

Software Engineer/ Intern

ManyDesigns Srl [15/05/2023 – 13/11/2023]

1. Played a key role in the development of two business application projects, contributing to their successful implementation and functionality.
2. Employed a range of frontend development tools and frameworks to enhance user experience and data visualization in various projects. Implemented solutions for streamlined data management and visualization, enhancing the overall efficiency and effectiveness of project workflows.
3. Demonstrated adaptability and initiative in a fast-paced internship environment, actively seeking out opportunities to contribute to diverse and innovative Full Stack Development projects.

Robotics Engineer/ Intern

Green Project - GP Marking & Reading Systems [06/02/2023 – 06/05/2023]

City: Genoa | Country: Italy

1. Working with Kukasimpro, kuka Workvisual, Kuka SystemSoftware, Kuka Control pad and Kuka Robot Language(KRL). Mechanical 2D layout and 3D layout analysis
2. Electrical knowledge of our whole system operation and testing of Robots before deployment
3. Essential travel for cold commissioning. Interacting with clients and project meetings.

Software Engineer / Developer

ACETEQ web services private limited [07/2018 – 08/2019]

City: bangalore | Country: India

1. Proficient in front-end development technologies including HTML5, CSS, and JavaScript, with hands-on experience in building responsive and visually appealing static web pages.
2. Skilled in React for dynamic user interfaces and proficient in utilizing Postman for API testing, ensuring robust and reliable software functionality.
3. Collaborated effectively in a team environment, conducting code reviews, performing bug fixes, and maintaining high code quality standards to deliver successful projects.
4. Designed and implemented static web pages, demonstrating creativity and attention to detail in creating user-friendly interfaces and optimizing user experience.

Robotics engineering technician Intern

Avyang Technologies Private Limited [01/2017 – 01/2018]

City: Mysore | Country: India

1. Created intricate CAD designs using SOLIDWORKS and CATIA, then materialized them via 3D printing.
2. Programmed microcontrollers like ARDUINO, RASPBERRY PI, and BEAGLE BONE BLACK, integrating them with sensors and motors for seamless functionality.
3. Led the development of a innovative smart device merging digital media education, from ideation to successful prototyping. Conducted engaging workshops, mentoring over 240 students across four batches, nurturing a passion for robotics through practical projects.

EDUCATION AND TRAINING

Msc Robotics Engineering

University of Genoa [10/2019 – Current]

City: Genova | Country: Italy

BE Mechanical Engineering

The National Institute of Engineering [06/2014 – 06/2018]

City: Mysore | Country: India

LANGUAGE SKILLS

Other language(s): Italian - basic | English - Proficient User

DIGITAL SKILLS

python/ C/ C++ / Javascript/ HTML/ CSS / KRL (Kuka Robot Language) / CatiaV5, Solidworks, Fusion 360 / Robot Operating System, Gazebo, Rviz, Navigation, SLAM / Arduino/ raspberrypi / Machine Learning / Git / ubuntu/windows/Macos / UNITY 3D

Soft Skills

problem solving / Team management & Team work / Leadership

PROJECTS

[05/2023 – 12/2024]

Unity Simulation for Synthetic Data Generation Created a Unity simulation to generate synthetic data for training computer vision models in laparoscopic kidney surgeries.

Link: <https://drive.google.com/file/d/12-Vzmp9bA4R89ye23fOPQwmX8ARJZj7l/view?usp=sharing>

Pepper Robot - Autonomous Navigation In this project, the algorithm of Artificial Potential Fields (APF) was implemented for Autonomous Navigation of the Pepper Robot to reach a given target. For this purpose, Choreograph software was used to write the program in Python language, and deploy it on the Robot.

Link: <https://github.com/SaiVinay023/Social-Robotics--2-projects>

REST api with nodejs and expressjs Developed an Api for CRUD operations and Database connection, mongoDB and Postman for testing

Link: <https://github.com/SaiVinay023/REST-api-with-nodejs-and-expressjs>

VOLUNTEERING

[11/2020 – 01/2021] Genova, Italy

AIESEC Team member

- Project Management (Worked on projects called Make Eat, World Largest Lesson, Schools for Global Goals)
- Team Building (Hired New People to the organization), International Relationships with various Local Committees across the world (Turkey, Germany, Spain, Poland, Romania, India, and Sri Lanka)

Link: <https://www.aiesec.it/>

[03/2017 – 06/2018] Mysore, India

NIE ROBOTICS CLUB Vice President and Technical Head

- Established the first robotics club in 2016. Held robotics workshops and training for club members in area of robot design and prototyping. Held Roborikishi National Competitions.
- Conducted and tutored 3 days and 7 days workshops on building Robots.

Link: <https://www.facebook.com/RoboticsClubNIE/>