Adithya Mylavarapu Naga

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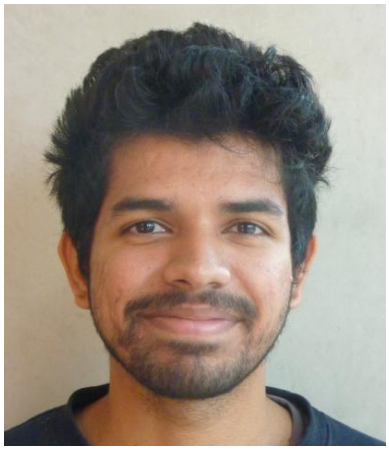
Location : Enschede, Netherlands



About Me

Enthusiastic and Organized Robotics Developer from the University of Twente, Netherlands. I utilize my interpersonal skills to promote effective teamwork, breaking down problems into accessible steps.
Hobby: Ultimate Frisbee, Bouldering

Education

Master's in Systems and Control

Robotics and Mechatronics
Sept 2021 - July 2024
University of Twente, The Netherlands

B.Tech Mechatronics Engineering

June 2017 - July 2021
S.R.M. Institute of Science & Technology, India

Skills

Software Development

- C++
- ROS/ROS2
- Gazebo
- MATLAB/Simulink
- Docker
- Git
- CasADi

Coursework

- Optimal Control
- Systems Dynamics
- Motion Planning
- Computer Vision
- SLAM
- Trajectory Optimization

Languages : English (C1) ◇ German (B1)

Experience

Student Assistant - Advanced Software Development for Robotics

- Teaching assistant for Advanced Software Development for Robotics Course
- Hands on Experience with control of real-time mechatronic setup using RTOS and RPi

Feb - April 2023/Nov - Feb 2022 | University of Twente | Xenomai, ROS2(C++)

Robotics Intern - Aziobot B.V.

- Gained experience in robot design and simulation of Autonomous SLAM in ROS.
- Implemented on Self-Exploration and Mapping for a floor scrubber robot and optimized navigation.

Sept - Jan 2023 | Aziobot B. V. | ROS(C++), RViz, Gazebo

Projects

Project Details and Additional Contributions

Safety Metric for Human-Aerial Robot Collaboration, in presence of Aerodynamic Disturbances

- Designed an NMPC for UAVs to optimize trajectory under aerodynamic disturbances in real-time.
- Implemented Simulink and Gazebo Simulation for safety analysis.

July 23 - July 24 | Master Thesis | MATLAB/Simulink, CasADi

Development of a Collaborative Multi-Robot System for Material Handling

- Designed an algorithm to maintain multi-robot formation in object transportation.
- Implemented an path planning algorithm to plan a trajectory for the robots.

December - June 2021 | Bachelor Thesis | ROS(C++), RViz, Gazebo

Behavioral Cloning in Autonomous Vehicles using Deep Learning

- Implemented a self-driving car using behavioral cloning in the Unity Self-Driving Car Simulator
- Simulated Autonomous navigation on new tracks using LeNet CNN.

Jan - April 2021 | Project | Unity, Python, Keras

Achievements & Contributions

Patent : Nov 2020	An On-board Hardware Addressing System for Modular Reconfigurable Robots
Publication : April 2022	Composite Robot Algorithm and Multi-Robot Formation Strategy for Collaborative Material Handling Systems
Awards : Runner's Up	Make-a-thon 4.0 by Lema Labs - Robotics Hackathon

Certificates

Feb 2020 - July 2020	Self - Driving Cars Specialization - University of Toronto (Coursera)
Jan - June 2020	Control of Mobile Robots - Georgia Institute of Technology (Coursera)
Nov - January 2020	Autonomous Mobile Robots - ETH Zurich (Edx)

Note: Projects and additional contributions are detailed in my portfolio $\longrightarrow$ adithyamn.github.io.