

Suhrudh S

suhrudhsarathy.github.io | suhrudhs@gmail.com | +91 9390262933
Third Year Undergrad at BITS Goa, India (Major: EEE, Minor: Phy)

EDUCATION

BITS PILANI

BE IN ELECTRICAL ENG

Aug 2019-Present | Goa, India

Major in Electrical Eng

Minor in Physics

CGPA: 7.5/10

LINKS

Twitter:// [SuhrudhS](#)

Github:// [SuhrudhSarathy](#)

LinkedIn:// [Suhrudh Sarathy](#)

COURSEWORK

UNDERGRADUATE

Calculus, Probability and Statistics

Linear Algebra, Differential Equations

Optimisation

Mechanics, Oscillations and Waves

Computer Programming

Control Systems, Modern Control

Systems

OTHERS

Introduction to Robotics

Advanced Robotics

SKILLS

PROGRAMMING

Proficient:

Python • Shell • C/C++

Comfortable:

Javascript • MATLAB • \LaTeX • QML

TOOLS

Pytorch • Tensorflow • Numpy •

Matplotlib • OpenCV

ROS1 • ROS2 • Arduino

VOLUNTEER

• Senior Core Member (2019-Present),
Electronics and Robotics Club(ERC)

• Senior Core Member (2019-Present),
Aerodynamics Club

• Core Member (2020-2021), Project
Kratos

RESPONSIBILITIES

PRESIDENT, CTE

• Lead a team of 40+ people at BITS Goa
to increase the tech culture by conducting
workshops, funding projects and
mentorship

EXPERIENCE

RBCCPS, IISC | RESEARCH INTERN (BACHELOR'S THESIS)

Jun 2022 – Present | Bangalore, India

• Working under the supervision of Prof. Shishir Kolathaya, IISc and Prof. Debashish Ghosh, IISc on developing navigation algorithms for Heterogeneous swarm of robots mainly intended to be used in agriculture.

PEPPERMINT ROBOTS | ROBOTICS INTERN

June 2021 – July 2021 | Pune, India

• Developed a new Human Machine Interface in **QtQuick** and **QML** that is touch enabled. • Worked on developing a Motion Primitives based local path planning algorithm. Tested and optimised the planning time to be less than 100 ms.

OTTONOMY | ROBOTICS INTERN

Sep 2021 – Dec 2021 | Remote

• Tested and compared Sampling based and search based planning algorithms for Navigation in Urban environments • Developed a 2.5D search based algorithm and designed and tested heuristics for planning.

BLACK COFFEE ROBOTICS | ROBOTICS INTERN

Mar 2022 – May 2022 | Remote

• Developed Multi Robot simulation tools • Designed and developed Robot simulation in Unity and integrated them with ROS/ROS2.

PROJECTS

AUTONOMOUS DRONE | OPEN SOURCE, PERSONAL

August 2020 – December 2020

• Built a ROS package for an Indoor Autonomous Drone. • Successfully wrote and tested an RRT based 3D Path Planner with Trajectory Optimisation. • Wrote an article on my website on the project.

TROTBOT | OPEN SOURCE, ERC

Jan 2020 – May 2022

• Restructured and built the software stack for an **Omni directional autonomous indoor robot**. • Researched and implemented indoor localisation. • Lead the team on research and future development using learning based techniques.

GENNAV | OPEN SOURCE, ERC

May 2020 – Oct 2020

• Contributed to building a modular python package for autonomous navigation algorithms. • Worked on integrating the algorithms to ROS using a wrapper.

3D MAPPING OF DRONE SWAMPS | FUNDED PROJECT, GOA

Sept 2021 – Dec 2021

• 3D Mapped an area of 44.8 sq. km of Mangrove Swamps in and around Goa using a DJI Phantom • Built a Ensemble model for Species Identification (acc. 86%, f1. 0.86) and an app using TKinter.

TEACHING

INTRODUCTION TO AERODYNAMICS AND AERIAL ROBOTICS | CTE

Jan 2021 – May 2021

ROBOT AUTOMATION USING ROS | QSTP

Jul 2021 – Sept 2021