Suhrudh S

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Third Year EEE Undergrad at BITS Goa, India | Robotics Enthusiast

EDUCATION

BITS PILANI
BE in Electrical Eng
Aug 2019-Present | Goa, India
Major in Electrical Eng
Minor in Physics
CGPA: 7.78/10

SRI CHAITANYA EDUCATIONAL INSTITUTIONS
Grad. March 2019| Vijayawada, India

KENDRIYA VIDYALAYA
Grad. March 2017| Chennai, India

LINKS

Twitter:// **SuhrudhS**
Github:// **SuhrudhSarathy**
LinkedIn:// **Suhrudh Sarathy**

COURSEWORK

UNDERGRADUATE
Digital Design, Microprocessors and Interfacing
Electronic Devices, Microelectronics
Calculus, Probability and Statistics
Linear Algebra, Differential Equations
Mechanics, Oscillations and Waves
Electromagentic Theory, Quantum Mech
Theory of Relativity, Astrophysics
Computer Programming
OTHERS
Introduction to Robotics Advanced Robotics

SKILLS

PROGRAMMING
Proficient:
Python • Shell • C/C++
Comfortable:
Javascript • MATLAB • LaTeX• QML
TOOLS
Pytorch • Numpy • Matplotlib • OpenCV
ROS1 • ROS2 • Arduino

SOCITIES

•AAP Incharge, Core Member, Center for Technical Education
•Core Member, Electronics and Robotic Club
•Core Member, Aerodynamics Club

EXPERIENCE

PEPPERMINT ROBOTS | Robotics Intern
June 2021 - July 2021 | Pune, India
Worked on developing 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 validated the algorithm in Simulations.

PROJECTS

AUTONOMOUS DRONE | Open Source, Personal
August 2020 – December 2020
ROS package for an **Autonomous indoor Drone**. Tested under Gazebo simulation environment. Uses a **Depthmap** based Perception and **RRT** based planning algorithm

TROTBOT | Open Source, ERC
Jan 2020 – July 2020
ROS package for an **Omni directional autonomous indoor robot**. Contributed to writing the software stack of the Robot. It is aimed to be completely autonomous and able to traverse the an indoor location on its own. Uses RRT for local planning and Dijkstra's algorithm for global planning. Simulated in Gazebo using Omnibase.

GENNAV | Open Source, ERC
May 2020 – Oct 2020
Python package aimed at being modular and fit into navigation stacks of any robot. Contains implementation of many path planning algorithms and controllers for differential drive and omniwheel drive robots.

TEACHING

INTRODUCTION TO AERODYNAMICS AND AERIAL ROBOTICS | CTE
Jan 2021 – May 2021
Designed the Aerial Robotics Part of the Course. Taught basics of Path planning, Perception and State Estimation. Provided materials and live coding sessions for implementing various Algorithms.
ROBOT AUTOMATION USING ROS | QSTP
Jul 2021 – Sept 2021
Taught a course on Robot Automation using ROS. Provided Resources for Python Programming, Control Theory etc.

VOLUNTEER EXPERIENCE

PRESIDENT | Center for Technical Education
Apr 2021 – Present
I am currently leading the largest technical organisation on BITS Goa Campus with 40+ motivated students. I manage conduction of Courses, Conduct events and collaborate with various other organisations and clubs on the Campus to enhance the technical Culture of Campus.
MEMBER, AUTONOMOUS | Project Kratos
Jul 2020 – Present
I am a part of the Autonomous Subsystem of Project Kratos. Project Kratos is BITS Goa's submission to University Rover challenge. I contributed to building the navigation stack of the Rover in outdoor environments.