Mohammed Saad Hashmi

7 Bina Nagar Vasna Road, Vadodara 390015

hashmis79 | saadhashmi.netlify | hashmis104@gmail.com | hashmis79 | +91 9925936955

EDUCATION

Veermata Jijabai Technological Institute — **Mumbai, India**
B-tech Mechanical Engineering CGPA: 8.25/10 — *Expected Graduation: June 2023*

EXPERIENCE

Centre for AI and Robotics, DRDO, India — **Bangalore, India**
Intern — *June 2022 - July 2022*

- Designed the simulation setup for Single Arm Manipulation of Various Objects using **ROS, Gazebo, MoveIt**.
- Implemented GraspNet for End Effector Pose Estimation while picking up uncommon objects.
- Was instruemental in the interfacing of Gazebo, MoveIt, OpenCV and GraspNet for a functional simulation Setup.

Robert Bosch Center for Cyber-Physical Systems, IISC Bangalore — **Bangalore, India**
Research Intern — *Dec 2021 - April 2022*

- Designed the foot of a quadruped and later 3D Printed the part(made of **TPU**).
- Tested the response of the foot when in contact with the ground using a **Force Sensing Resistance (FSR)**
- Designed the **Heat Sink** for the BLDC Encoders to avoid overheating of the circuits.

PROJECTS

Delta PSP - Pick and Place Bot — **github.com/Delta2021**
SolidWorks — *May 2021 – July 2021*

- Assisted in the successful designing and in the construction of a fully scale gantry bot for the purpose of sorting parcels in a limited Time frame.
- Standardized all the parts for manufacturing, suggested some major design changes for ease in construction.

Vitarana Drone - Disaster Management — **github.com/E-Yantra_Tasks**
ROS, Gazebo, Python, OpenCV — *Oct 2020 – Feb 2021*

- Successfully implemented an autonomous **ROS** based Autonomous Control System on a UAV(Quadrotor) simulated in Gazebo. Under the All India Eyantra Robotics Challenge.
- Implemented Nested PID Control for controlling the position of the drone
- Used HAAR Cascades in **OpenCV** for Detection of Landing markers and implemented **Obstacle avoidance and Path planning**.

Moodylyser — **github.com/Moodylyser**
Python , Keras, OpenCV, Git — *May 2020 - June 2020*

- Aim of this project is to predict emotions of a person by analysing a live videofeed of a person.
- We detected and processed the face of a person using **OpenCV**.
- We built an **CNN** Model using **Keras** which predicted the emotions of a person by detecting the different features of a person's face.

POSITION OF RESPONSIBILITY

Society of Robotics and Automation — **Mumbai, India**
Mechanical Head — *June 2021 – Present*

- Co - conducted many workshops like Wall-E (Self balancing bot) and Mario(3-DOF Manipulator) for over 200 Freshmen.
- Contributed in the code for 3-DOF Manipulator in **ROS- Gazebo** for the Mario Workshop.
- Taught the basics of various topics like **CAD, Forward Kinematics, Pneumatics** to over 100 Freshmen

ACHIEVEMENTS

- Were in the **Top 20 Teams** nationally, for All India E-yantra Robotics Challenge.
- Were in the **Top 18 Teams** nationally, in Micro-Mouse Challenge organized by IIT Bombay.

Skills

- **Programming Languages** : Python, C , C++
- **OS** : Windows, Linux, ROS, Gazebo, MoveIt
- **Softwares** : CoppeliaSim, Git, Github, Matlab
- **CAD Modelling** - Solidworks, Fusion360, VoxCad
- **Languages** - English, Hindi