# Kaivalya Shah

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### Education

B.Tech in Computer Engineering and Minor in Robotics

2022 - Present

@Pandit Deendayal Energy University (Gandhinagar) CGPA: 9 (current)

Skills

• Field of Knowledge

Developer Tools

• Microcontrollers/Microprocessors

Robotics , Control , SLAM , Nav2  $\,$ 

ROS2, Git, Gazebo, Rviz2

Raspberry Pi, Arduino, Jetson NANO

## **Projects**

1. Multi Purpose Bot in ROS2: ROS2 package, designed for spawning a robot model in the Gazebo simulator. The package includes URDF descriptions for various components such as camera, depth camera, lidar, and robot core. Additionally, it provides control configurations and launch files for SLAM.

- 2. YoloV8 in ROS2: This repository contains the YoloBot src ROS2 package, which subscribes to the /camera/image raw topic, performs inference using YOLOV8, and publishes the inferred results.
- 3. Micromouse (IITB TechFest): Robot with a 5-IR sensor array uses Dry run to solve Maze and finds the shortest path with string manipulation method.
- **4.** PathFinder Bot with PID: wall maze solver implemented using an Arduino board and a PID algorithm. The goal is to navigate through a maze by following the walls while avoiding collisions.

## **Experience**

- iNav Labs (Startup): Contributed as ROS developer to simulate model of autonomous car module using Jetson Nano
- Cretus Tech Core: Involved in Various Robotics events of PDEU Robotics Club

#### Certifications

NPTEL : Python for Data Science

• NPTEL: Sanskrit