# Kaivalya Shah

A year studying AI can make even a skeptic believe in God.

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#### **EDUCATION**

# **PDEU**, Gandhinagar — *Btech* in CSE + Minor in Robotics

July 2022 - PRESENT

Current year - 3rd

CGPA: 8.7

## **EXPERIENCE**

# **IITGN ROBOTICS**, Gandhinagar — Research Intern

May 2024 - PRESENT

Developed pipelines for computer vision and 3D reconstruction analysis projects under Prof Harish PM.

## iNav Labs (Startup), PDEU — ROS Intern

March 2024 - May 2024

ROS developer for autonomous car modulation using Jetson Nano

## **PROJECTS**

# **6DOF Live Pose Estimation and Tracking** — With ROS Pkq

Live transformation matrix from camera to object with depth camera upto 90 fps.

## **Novel 3D Reconstruction (NeRF + LoFTR)** — RGBD to .obj

NeRF Textured object reconstruction even when visual texture is largely absent via Local Feature Matching .

## **Multi Purpose Differential Drive Robot** — ROS2 pkq

URDF + Gazebo World , Capabilities : SLAM, NAV2 Stack, RGBD vision, Point cloud generation.

# **YoloV8 and Midas** — ROS2 pkg

Object detection with monocular depth estimation.

#### **SKILLS**

Hands On - CV, NeRF, LoFTR, LLM, ViT, CLIP, LlaMA/VA.

Linux - ROS, Gazebo, SLAM, Nav2, CUDA.

Theory of Robotics and Control System.

Hardware hands on - Arduino, ESP32, Jetson.

CAD - Fusion 360.

Tools - Docker, Conda, Git.

#### **LIBRARIES**

PyTorch, TensorFlow, Open3D, Keras.

Numpy, Scikit-learn.

#### **LANGUAGES**

C++, Python, Java, R, MatLab, MD

## **HOBBIES**

**Football** 

Flute

Sanskrit

**Graphic Designing**