Pratik Mahankal | LinkedIn | GitHub

Quick learner, Hardworking, Reliable | Contact: pratik.mahankal14@gmail.com

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TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java, JavaScript

Robotics Stack: ROS, Gazebo, MoveIt, RViz, played with various MCUs, RC communication, Locomotion

Databases: PostgreSQL, Oracle, MySQL, Data Warehousing, Data Mining, Good Conceptual Understanding

Web stack: Node.js, Express, EJS, Database Connectivity, User Auth, HTML, CSS, BootStrap

Other: OpenCV, Docker, Linux Kernel, PyQT5, Tkinter

EDUCATION

St. Francis Institute Of Technology - B. Tech Computer Engineering (CGPA 9.49/10)

Currently pursuing (2019-2023)

Relevant Courses - **Data Structure & Algorithms, Databases, OS, Microprocessors, and Computer Networks.**

WORK EXPERIENCE

Robotics Engineer Intern at RigBetel Labs®

August 2021 (Ongoing)

Robotics Developer at Team RAW, SFIT

August 2020 (Ongoing)

- Participated in **EYRC 2021, ABU Robocon 2020 (AIR 11),** and **ABU Robocon 2021 (AIR 20)** - international robotics competitions where the problem statements are based on the host country's popular game.
- I was responsible for managing the software for the bots, which include simulation, locomotion, communication, controlling actuators, and documentation of it.
- As robotics is a multi-disciplinary field I also explored the electronics systems and various mechanisms used.

PROJECTS

Eyantra Robotics Competition: Automated Warehouse Simulation (Video Demo)

- Implemented this project during a six-month-long international competition held by **IIT Bombay.**
- Built a simulation where packages will be managed using two robotics arms, two logical cameras, one color camera to read QR codes, and a speed variable conveyor belt. All the information about packages was to be displayed on a dashboard.
- Tech Stack: ROS, Gazebo, Google Sheets API, and MQTT Servers.

Sign Gesture Assistant : (Code | Video Demo)

- Built a system that translates selected sign languages and displays them on GUI.
- Used the OpenCV library to take the input from a camera, I also integrated it with our GUI.
- Here I used the MediaPipe hand-tracking model, which estimates the position of the hand and gives the position of the landmarks found. Using the orientation of those landmarks, the system predicts the sign and displays the text on a GUI which was made using the pyQT5 library.

Patient Database Web Application : (Code | Video Demo)

- Created a CRUD-based web application for clinics to store patient data.
- Used Java with Spring Boot Framework and Hibernate, Thymeleaf in the frontend, and MySQL database to store information.

Surveillance System using Motion Detection, IoT project : (Code)

- Usually, we see cameras being used for surveillance, which can violate their privacy in some personal areas. So here I used a motion detector approach for surveillance.
- Present a working IoT Motion Detection security model that sends a notification to the user when motion is detected in a room. It also records these logs in Google Sheets.
- Here I used an ESP8266 MCU and PIR sensor, with IFTTT for sending notifications, email, and updating Google Sheets.