Vaibhav Raheja

✉ vaibhavraheja32@gmail.com 📞 +91 9820712740 📍 Mumbai-400052, India in linkedin.com/vaibhav-raheja/

M medium.com/@vaibhavraheja32 ⬡ github.com/Vaibhavr26 ⟋ vaibhavr26.github.io

Education

Mukesh Patel School of Technology Management & Engineering, Mumbai, India	2017 – May 2023
Bachelors of Technology Computer Engineering (CGPA - 3.12/4)	Expected

- Relevant Courses: Robotics, Embedded Systems, and AI

Mukesh Patel School of Technology Management & Engineering, Mumbai, India	2017 – 2023
Diploma in Computer Engineering	Expected

Professional Experience

Research Intern	Feb 2021 – Feb 2023
AIIMS (All India Institute of Medical Sciences) Hospital, New Delhi, India	

- Working on a research project utilizing a robot arm that performs Robotic Oral Surgery with the help of control systems created using ROS and Python.
- Project funded by the ICMR (Indian Council of Medical Research)

Intern	Jan 2020 – May 2020
Granuler: CIO Consulting, Mumbai, India	

- Project CRM (Customer Relation Management Implementation)
  - Deployed a CRM system for Granuler CIO Consulting using HubSpot CRM.
  - Collected the client requirements and fulfilled them to improve the company's workflow by 70%.
- Project RPA (Robotic Process Automation)
  - Used UiPath to automate the CEOs workflow by reducing the time to less than 30 mins

QA Intern	Jul 2018
Intelligence Node, Mumbai, India	

- Learned the basics of web applications, understood beta testing and executed tests on multiple web applications.

Academic Projects

Chronic Disease Detection System using Machine Learning	2021 – 2022
B. Tech Final Year Project	

- Developed an expert system used to predict various chronic diseases by collecting various health details of a patient using Machine Learning models to provide a helping hand to doctors.
- Validated the model with an accuracy of over 90%
- Implemented for: COVID-19, Pneumonia, Heart Disease, Chronic Kidney Disease, Diabetes

Soft Robotics Hand	2022

- Developing a Soft Robotics Hand controlled by stepper motors that will be able to grab almost any object
- It reads my hand's position using OpenCV and replicates it onto the robotic hand.
- The future scope is to assist doctors in holding specific tools during surgery.

Custom Drone	2022

- Creating a completely custom drone made by 3D modeling and printing a custom modular body.
- Using a 1200kv BDLC motors with an ESC and using an OpenPilot CC3D EVO Flight Controller

Skin Disease Detection	2019

- Created a machine learning model by using Transfer Learning with CNN (Convolutional Neural Network) to detect over 20 Skin Diseases with an accuracy of 88%

Home Automation	2020

- Developed a complete system to control most electronics from a mobile phone or using voice commands on google assistant.
- Achieved this using ESP-8266 microcontroller. Some electronics include Lights, fans, Air conditioners, and RGB-controlled lights.

Technical Skills

- Programming: Python, C, C++, ROS, Machine Learning, Deep learning, HTML, CSS Java
- Micro-Controller Boards: Arduino, Raspberry Pi, ESP
- Software's: Fusion 360, MS Office, Android Studios, Arduino, MATLAB, Anaconda

Extra-Curricular Activities

Intelligent Ground Vehicle Competition, Detroit MI, USA   2020 – 2022
Vice-Captain
- Achieved 3rd place at an annual international competition hosted at Oakland University, Michigan, in which multidisciplinary teams compete to create an autonomous vehicle according to a set of rules in order to compete. Developed a fully functioning autonomous vehicle with object detection, path planning & traversal.

Rotaract Club of Bombay Airport, Mumbai, India   2019 – 2021
Board of Director of Club Service from 2020-21
- Managed and initiated all Club Service activities, supervised and coordinated the work of the committees appointed for particular aspects of Club Service and ensured the smooth and effective running of the club, and created a climate and culture that made our club inviting, appealing, and attractive.

e-Yantra Robotics Competition (eYRC), Mumbai, India   2020 – 2021
- Participated in a competition held by IIT Bombay. Our task was to make a drone for the delivery of parcels.

The Editorial Project by MPSTME, Mumbai, India   2019 – 2020
Head of Logistics
- Managed and organized a concert by The Local Train at JRM Grounds

Lane Detection using Hough Transform and Histogram   2019
- Wrote an article to explain lane detection using computer vision using the Hough Transform. This article has approximately 400 reads.

Roller Hockey, Mumbai, India   2012 – 2013
Team Captain
- Achieved 3rd place in a National Level Roller Hockey Tournament in Haryana.

Publications

Multi-Disease Prediction System using Machine Learning
IEEE International Conference on Futuristic Technologies (INCOFT)
- To be Published (Jan 2023)