Vaibhav Raheja

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Education

Mukesh Patel School of Technology Management & Engineering, Mumbai, India　　　2017 – May 2023
Bachelors of Technology Computer Engineering　　　(CGPA - 3.63/4)　　　Expected
- Relevant Courses: Robotics, Embedded Systems, and AI

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

Professional Experience

AIIMS (All India Institute of Medical Sciences) Hospital, New Delhi, India　　　Feb 2021 – Feb 2023
Research Intern
- Working on a research project to implement Robotic Oral Surgery using a robotic arm and develop control systems using ROS and python for the robot
- Project funded by the ICMR (Indian Council of Medical Research)

Granuler: CIO Consulting, Mumbai, India　　　Jan 2020 – May 2020
Intern
- Project CRM (Customer Relation Management Implementation)
  - Deployed a CRM system for Granuler CIO Consulting.
  - Collected client requirements and fulfilled them using HubSpot CRM. 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

Intelligence Node, Mumbai, India　　　Jul 2018
QA Intern
- 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

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.

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.

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 90%

Publications

Multi-Disease Prediction System using Machine Learning　　　2022
IEEE International Conference on Futuristic Technologies (INCOFT)

Extra-Curricular Activates

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.

Technical Skills

Programming
- Python
- C++
- ROS
- Machine Learning

Micro-Controller Boards
- Arduino
- Raspberry Pi

Software
- Fusion 360
- MS Office