Vaibhav Raheja

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Education

Master's of Engineering Autonomy and Robotics
University of Illinois Urbana-Champaign Champaign, IL
2023 – 2024

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

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

Professional Experience

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

- Worked on a research project utilizing a robot arm for Robotic Oral Surgery using ROS & Python.
- The project was funded by the Indian Council of Medical Research (ICMR) for $85,000

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

- Implemented CRM (Customer Relation Management) system using HubSpot CRM.
- Automated CEO's workflow using UiPath for Robotic Process Automation (RPA).

Intelligence Node, Mumbai, India
QA Intern
Jul 2018

- Gained experience in web application testing and beta testing

Skills

- Programming: Python, C, C++, Robot Operating System(ROS), Machine Learning, AI, HTML, CSS, Java
- Micro-Controller Boards: Arduino, Raspberry Pi, ESP
- Software: Autodesk Fusion 360, Microsoft Office, Android Studio, Arduino IDE, MATLAB, Anaconda

Publications

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

- DOI: 10.1109/INCOFT55651.2022.10094382
- ISBN:978-1-6654-5046-1

Academic Projects

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

- Developed an expert system achieving over 90% accuracy in predicting chronic diseases such as COVID-19, Pneumonia, Heart Disease, Chronic Kidney Disease, and Diabetes.

Soft Robotics Hand

- Developing a Soft Robotics Hand controlled by stepper motors.

Custom Surveillance Drone

- Built a custom surveillance drone with a modular 3D-printed body and specific components.

Home Automation

- Designed a system to control electronics using mobile phones and voice commands with Google Assistant.

Skin Disease Detection

- Developed a machine learning model using Transfer Learning and CNN, achieving 88% accuracy in detecting various skin diseases.

Extra-Curricular Activities

Intelligent Ground Vehicle Competition (IGVC), Detroit MI, USA
Co-Captain
2021 – 2023

- Led team to a 2nd and 3rd place in the Cyber and AutoNav Challenge, demonstrating proficiency in autonomous vehicle navigation

e-Yantra Robotics Competition (eYRC), Mumbai, India
2020 – 2021

- Participated in a competition held by IIT Bombay to make a drone for the delivery of parcels.

Rotaract Club of Bombay Airport, Mumbai, India
Board of Director of Club Service
2019 – 2021

- Managed and initiated Club Service activities, ensuring the effective running of the club.

Lane Detection using Hough Transform and Histogram
2019

- Article explaining lane detection using computer vision and Hough Transform.