

# Parthan Manisekaran

Robotics Graduate Student

Passionate Robotics Developer with 3+ years Experience in robotics software and embedded system development. A Maker by heart, will probably be seen around with wires and tools, learning cutting-edge tech and developing real world applications.



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## WORK EXPERIENCE

### UNIVERSITY RESEARCH ASSISTANT (HiWi) INSTITUT FÜR GETRIEBE-TECHNIK, MASCHINENDYNAMIK UND ROBOTIK, RWTH AACHEN

02/2022 - Present

Summary

- Initiated development of a modular application to control any ROS based Robots and deploy software models with ease.
- Developed a basic Progressive Web App which can read and write ROS topics through MQTT and control Robot Manipulators.
- Currently extending the functionality to other types of Robots and exploring use of Smartphone's Sensors.

Contact : Stefan-Octavian Bezrucav - bezrucav(at)igmr.rwth-aachen.de

### UNIVERSITY RESEARCH ASSOCIATE PES CENTRE FOR ROBOTICS, AUTOMATION AND INTELLIGENT SYSTEMS

08/2019 - 09/2021

Summary

- Led Project Quadbionics, a unique use of Supernumerary Robotic Limbs (SRL) to clear debris after calamities.
- Implemented Vision and Autonomous Capabilities in Project Quadbionics
- Developed the Path planning workflow for the manipulator using ROS, OpenCV and MoveIt

Contact : Dr. Shikha Tripathi - shikha@pes.edu

## EDUCATION

### M.SC. ROBOTIC SYSTEMS ENGINEERING RWTH Aachen University

10/2021 - Present

Summary

- Courses include: Robot Kinematics and Dynamics, Computer Vision and Machine Learning
- Research Project: Mobile Application to deploy Machine Learning model pipeline to ROS based Robot

### BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING PES University

08/2016 - 08/2020

Bengaluru, India

Summary

- Thesis: Supernumerary Robotic Limbs for the Visually Impaired
- GPA: 8.43/10

## SKILLS

ROS, MoveIt, Gazebo

OpenCV

Python, C++

Tensorflow

Linux, Bash

Embedded Systems

Unity, Vuforia

## ACHIEVEMENTS

### RWTH Student Project Grant (08/2022)

Received a Grant of €1350 for developing Deep Neural Network for Solar Soiling Estimation using Aerial Vehicle. Working towards a cost-effective solar soiling detection with built-in cost analysis and predictor

### Runners-up at #hackingforfuture - Fraunhofer IPT (05/2022)

Implemented a transformer algorithm for classification of time series dataset and compare the results with the LSTM network. We achieved an increase from 75% to 90.9 % accuracy using voting

### Runners-up at i-Days - EIT Health (11/2021)

Conceived "MedTalk" a Social Network for Doctors which focuses on transparency and secure communication to avoid an upcoming pandemic. Won Runners-up and best pitch award.

### Runners-up - Microsoft Hashcode (2018)

Developed an Augmented Reality tool for studying Engineering. Also secured a seed fund of \$ 26,000 for starting a startup based on the same idea

## ORGANIZATIONS

### Newolf Society (08/2020 - 01/2022)

Co-Founded the tech community to help Engineering undergrads of India learn tech by building and collaborating on cutting-edge projects.

## LANGUAGES

English  
Native or Bilingual Proficiency

German  
Limited Working Proficiency

Tamil  
Native or Bilingual Proficiency