Parthan Manisekaran

europass

(+49) 1624767319 | parthanmanisekaran@gmail.com | Oppenhoffallee 2, WG 2.2, 52066, Aachen, Germany

WORK EXPERIENCE

02/2022 – CURRENT – Aachen, Germany

UNIVERSITY RESEARCH ASSISTANT (HIWI) – INSTITUTE OF MECHANISM THEORY, MACHINE DYNAMICS AND ROBOTICS, RWTH AACHEN UNIVERSITY

- Initiated Project Lysis, a modular Robotic Ecosystem based on utilising Smartphones as the brain of the Robot.
- Working towards developing an easy-to-use modular software architecture for easy communication and control of robot manipulators and drones through smartphones.
- The features of the app involve path and trajectory planning of the Robotic Arm, augmenting the robotic manipulator with the Camera of the Smartphone and enabling to 'teach' the trajectory for the Arm by just moving the phone in space.

08/2019 – 09/2021 – Bengaluru, India

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

- Lead the Project Quadbionics, a unique use of Supernumerary Robotic Limbs (SRL) to aid Disaster Relief Operatives to help them manage debris after calamities.
- Designed and analyzed the SRL required to manage debris.
- Implemented Vision and Autonomous Capabilities in Project Quadbionics
- Developed the Path planning workflow for the manipulator (Perceive, Process Vision based data for debris coordinates and push the debris) using ROS, MoveIt and OpenCV

01/2020 – 05/2020 – Bengaluru, India

TEACHING ASSISTANT – PES CENTRE FOR INNOVATION AND ENTREPRENEURSHIP

- Assisted in setting up the Intel OpenVINO framework as a curriculum for sophomore students of PES Department of Electronics and Communication.
- Guided students to finish their capstone projects by taking up demo classes and presentations.
- Evaluated students' capstone project and collected insights from the students to enhance the course experience for the next batch.

EDUCATION AND TRAINING

10/2021 – CURRENT – Aachen, Germany

M.SC. ROBOTIC SYSTEMS ENGINEERING – RWTH Aachen University

Subjects Include: Advanced Robot Kinematics and Dynamics, Machine Learning, Computer Vision and Robotic Systems

https://www.academy.rwth-aachen.de/en/

08/2016 – 08/2020 – Bengaluru, India

BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING – PES University

Subjects Include: Hydraulics and Pneumatics, Aerospace Propulsion, Drone Computing, CFD

Thesis: Supernumerary Robotic Limbs for the Visually Impaired

8.43/10 | https://pes.edu

LANGUAGE SKILLS

Mother tongue(s): **TAMIL** | **KANNADA** | **HINDI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
GERMAN	A2	A2	A1	A1	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

Python (NumPy, Pandas, Scikit-learn, TensorFlow, Spacy) | ROS (MoveIt, Gazebo, RVIZ) | Git | C++ | Autodesk Fusion 360 | unity3d | PCB design software: Eagle and KiCAD | Computer Vision (OpenCV)

PUBLICATIONS

ARMER: Modular and Semi-Autonomous Supernumerary Robotic Limbs for Disaster Relief

https://dlnext.acm.org/doi/abs/10.1145/3478586.3480649 – 2021

Supernumerary Robotic Limbs for the Blind

https://ieeexplore.ieee.org/abstract/document/9342553 – 2020

HONOURS AND AWARDS

2018

Runners-up – Microsoft Hashcode

Won Runners up amongst 20 teams across the State. Also secured a seed fund of $ 26,000 for starting an Augmented Reality based startup

2018

Request for Innovation in Connected Cars – Xinova

Received a price money of $500 Dollars for presenting a solution on Inter-vehicle communication through Emoji

Dr CNR Rao Academic Scholarship – PES University

Received a scholarship of $320 USD