Kavin Palanichamy

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ABOUT ME

I am a Mechatronics Engineering student in my final semester. Along with my studies, I have participated in multiple internships focused on Automation, Robotics, and Software development including a partially Erasmus-funded internship in Germany. My interests include Robotics, systems & control engineering, industrial Automation and hardware-oriented software development, where I enjoy integrating mechanical systems with intelligent software to create new and innovative solutions.

EDUCATION AND TRAINING

Secondary Education

Sainik School Amaravathinagar [31/05/2016 – 22/03/2020]

City: Tiruppur | **Country:** India | **Website:** https://www.sainikschoolamaravathinagar.edu.in/ | **Final grade:** 91.2%

Bachelor's Degree - BSc.

Warsaw University of Technology [01/09/2020 – 15/02/2025]

City: Warszawa | **Country:** Poland | **Website:** https://www.pw.edu.pl/ | **Field(s) of study:** Mechatronics | **Thesis:** Ball Balancing Platform

PROJECTS

[01/08/2024 – Current]

Bachelor Thesis - Ball Balancing Platform I'm currently collaborating with the KN-Humanoid students' club to build a ball-balancing platform from scratch, which will serve as the central focus of my thesis. The goal of the project is to design a system capable of dynamically stabilizing a ball on a flat surface using real-time control mechanisms. The project is scheduled for completion by January 2025.

[01/01/2023 – 27/01/2023]

WaveSense Hackvision, an event hosted in collaboration with ESA with the aim of encouraging the utilization of open source satellite data, saw my team and me presenting a solution that leveraged elevation profiles to assess signal strength in a specific region. This proposal secured our victory in the initial stage and earned recognition in the finals.

WORK EXPERIENCE

Erasmus Internship as Mechatronics Engineer

Desion GmbH [10/02/2024 – 30/07/2024]

City: Darmstadt | **Country:** Germany | **Website:** https://desion.de/

- Design and Prototyping: Utilized 3D printing and Autodesk Inventor to design and iterate on a pneumatic gripper for soft fabric handling.
- Assisted in setting up Automation system for textile handling.
- Software Development: Implemented multi-threaded Python scripts to automate proprietary robotic textile handling system.
- Driver code development: Developed custom Python library for SMC Rotatory drive and Pololu drive, followed by integrating it with the operation cycle.

Junior Specialist – Programmer

Łukasiewicz – PIAP [01/10/2023 – 30/12/2023]

City: Warsaw | **Country:** Poland | **Website:** https://piap.lukasiewicz.gov.pl/

- During the internship, I had the opportunity to work with a state-of-the-art mobile robot (PIAP Hunter) developed by a leading State funded Polish robotics company.
- I was tasked with integrating and testing a UWB-based indoor positioning system for a mobile robot.
- C and C++ was primarily used, the new navigation system was integrated with the existing GPS based navigation map on the controller console of the robot.
- Following the outcomes achieved, we decided to continue researching the feasibility of developing an UWB based navigation system for mobile robots.

Industrial Automation Summer Trainee

B&R (Subdivision of ABB) [01/07/2023 – 31/07/2023]

City: Warsaw | **Country:** Poland | **Website:** https://www.br-automation.com/en/

The internship offered extensive training on Industrial Automation with PLC systems. The program concluded with a project. Automation Studio was used to successfully commission Control Software with HMI for CNC Machine.

DIGITAL SKILLS

C / C++ / Python / Autodesk AutoCAD / Autodesk Inventor / ANSYS / MATLAB Simulink / PLC-programming / C/C++ for Microcontrollers / Labview (basic level) / GIT version control, Linux Command

LANGUAGE SKILLS

Mother tongue(s): Tamil

Other language(s): English - C1