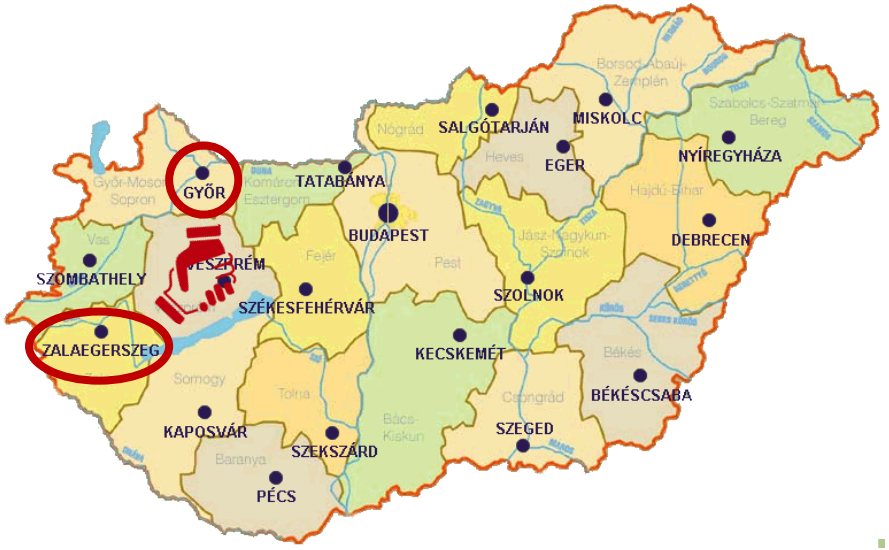
ZalaZONE-CleanForSZE

Infineon Virtual Hackathon Final Presentation
2022.09.16.

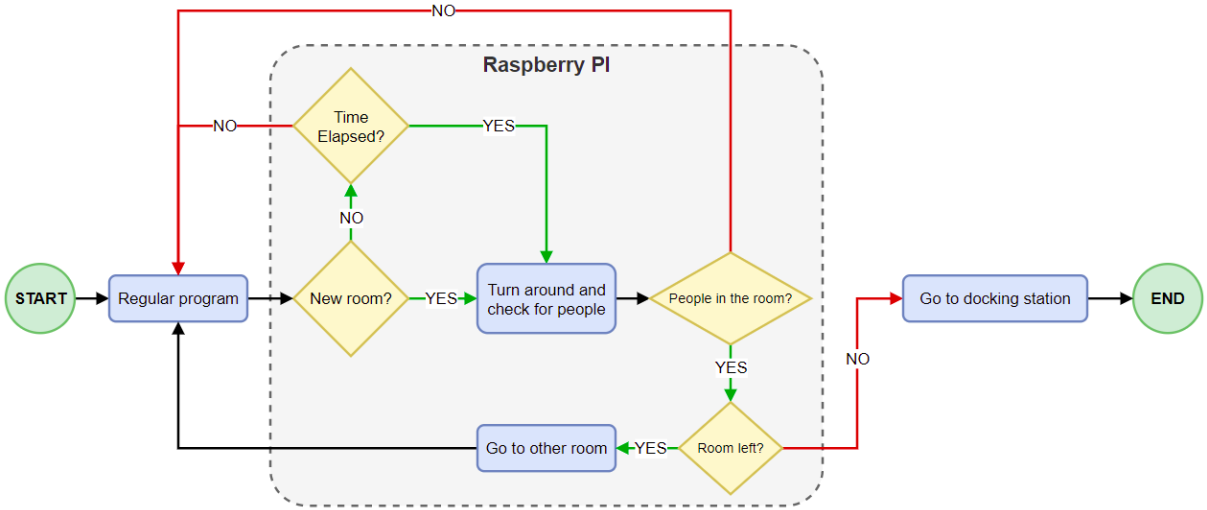
Project & Team Introduction

- **Team:** Cooperation of ZalaZONE and Széchenyi István University (Hungary)
- **Main goal:** Upgrade a robotic vacuum cleaner to not disturb (i.e. working) people
- **How to achieve:**
  - Recognize humans with radar
  - Send the robot cleaner to other room
- **Benefit:** uninterrupted home offfice



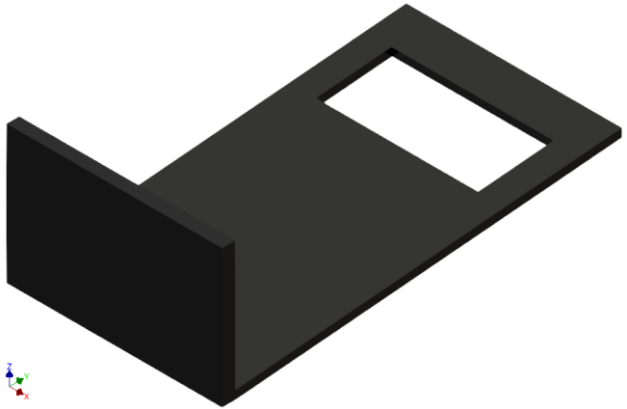
Implementation and tools

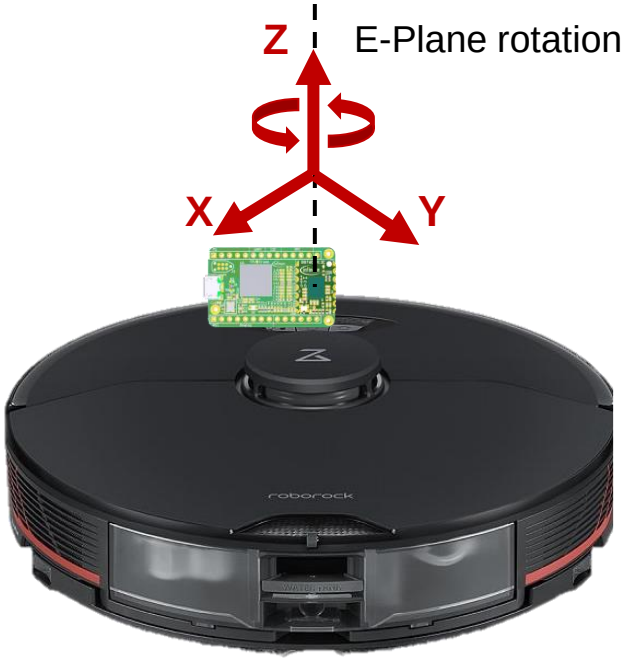
- **Aim:** Select a robotic vacuum cleaner with Reactive AI obstacle avoidance
- **Test environment:** workshop with three rooms
- **Solution:** interrupt the conventional software if needed



Final setup

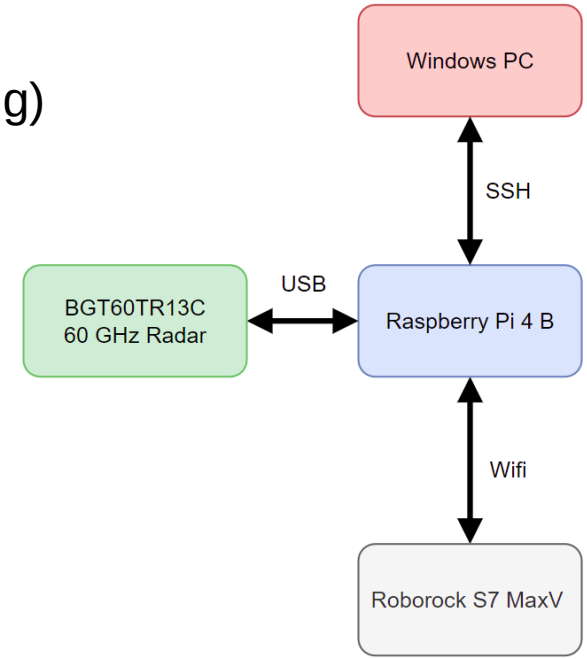
- **Platform:** Xiaomi Roborock S7 MaxV robotic vacuum cleaner
- **Control:** Raspberry Pi 4 Model B
- **Layout:** Positioning at the rotation axis (**Z**)
- **Mount:** 3D printed PLA console





Results

- **Software:** Python script controlling the robotic vacuum cleaner and takes measurements from the radar
- **Optional:** human activity classification (i.e. if working)



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