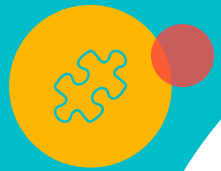

VALE:
Personal
Assistant



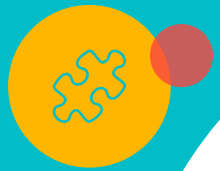
1.
Mission

What's the goal?

VALE is an autonomous robot that will map out a floor of a building using SLAM and Lidar. The user will then be able to select a room to have VALE guide them there.

Goals

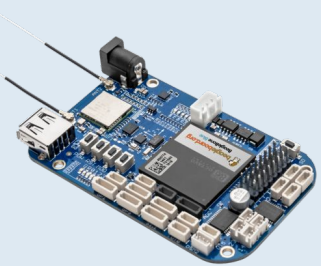
1. Map out area through the use of a SLAM algorithm
2. Accept user input of destination
3. Localize coordinates
4. Safely move to that location while avoiding obstacles with user
5. Update ‘landmarks’ while navigating.



2.

Components

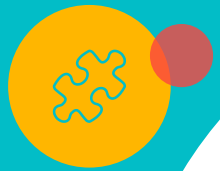
What will we use to meet our goals?



BeagleBone

Lidar

Scuttle



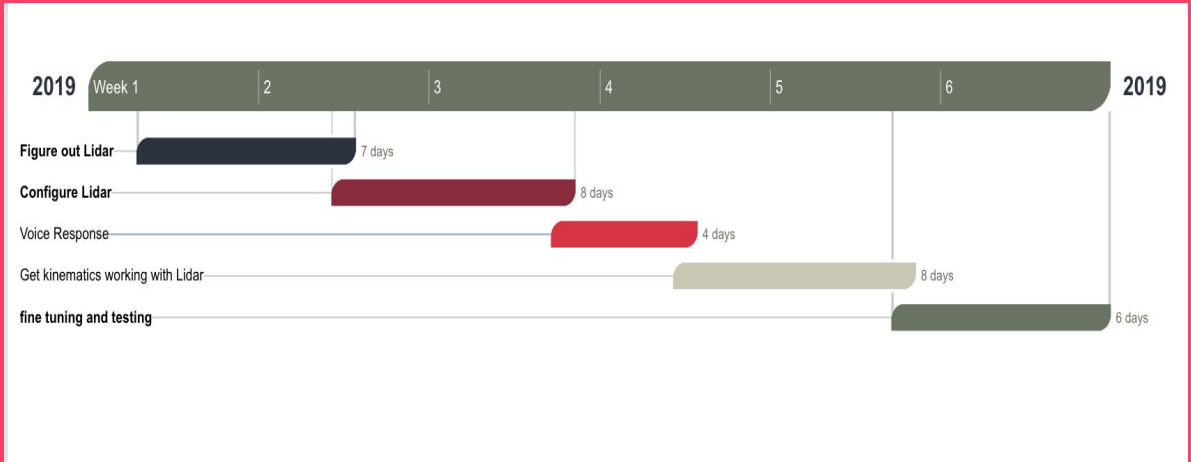
3.
Data Collection

How will we measure performance?

Metrics to measure performance

1. Did VALE reach the target?
2. Did VALE navigate safely?
3. Was the situational awareness sufficient for safe operation? Any close calls?
4. Was the speed optimal for letting the user follow the robot?

Timeline:


2019
Week 1
2
3
4
5
6
2019
Figure out Lidar
7 days
Configure Lidar
8 days
Voice Response
4 days
Get kinematics working with Lidar
8 days
fine tuning and testing
6 days

Thank You!

Any Questions?