CSE145 Project:

Smart droid,RD-1

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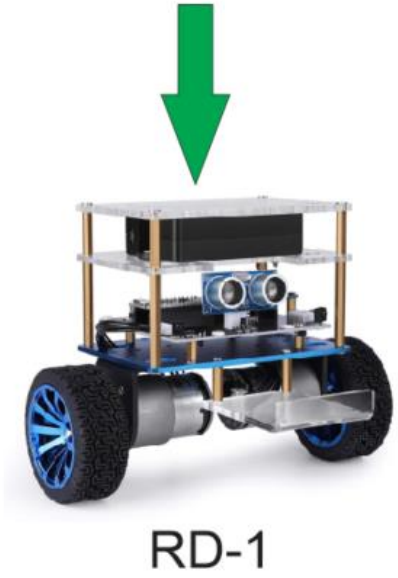
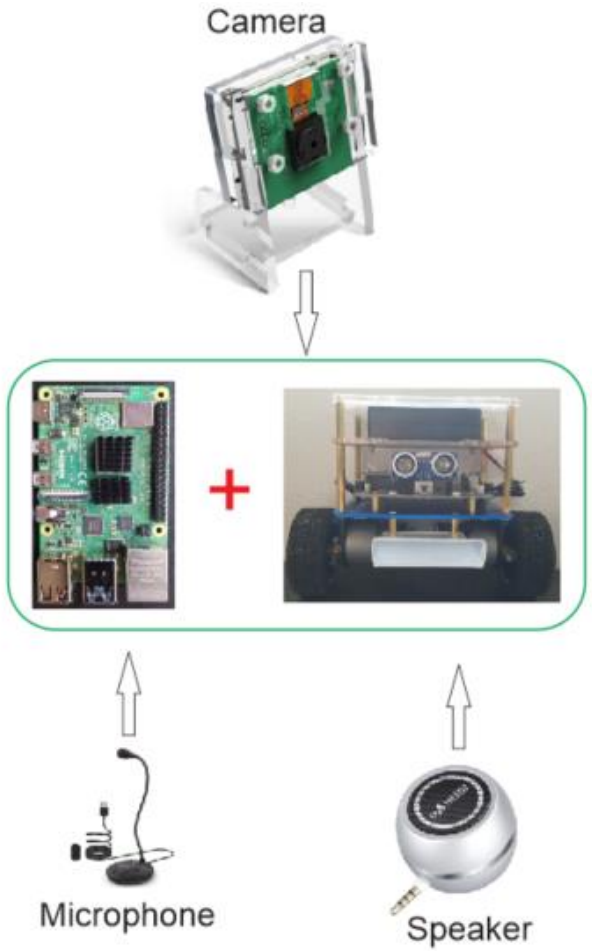
Introduction



- The idea for RD-1 come from star wars droids.
- RD-1 based on ELEGOO self balancing robot.
- Currently, ELEGOO's controller uses Arduino IDE to balance this droid by using 3 Axis Gyroscope sensor.
- RD-1 will use raspberry pi to develop smart functions.

The goal



- RD-1 could move and avoid obstacles on his way.
- RD-1 can recognize many kinds of objects around him.
- RD-1 receive commands from his master and execute these commands.
- RD-1 can talk and hear to communicate with his master.

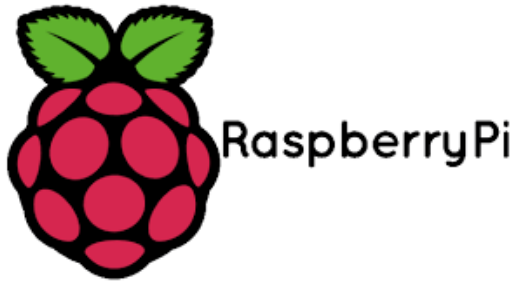
Progress

- Current progress
  - We bought ELEGOO self balancing robot.
  - We got Raspberry pi 4, Camera, speaker, microphone, Lidar sensor
- Next progress
  - Connect raspberry pi to the Arduino board
  - Send commands from raspberry pi to Arduino board
  - Work with voice library (google, Alexa)
  - Work with motion planning algorithms
  - Use machine learning to recognize objects

Skill requirements

Arduino IDE

Software



- Python software development
- Arduino IDE
- Machine learning.
- Voice library (google, Alexa)

Thank You for your time

Contact us

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