Final Assignment Models Predictors

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1. Problem definition

Mobile robotics is a popular solution for exploration of hostile environments (such as toxic or radioactive environments) where a direct human intervention is not possible. In this project it is asked that each team implements a robotic explorer and simulates 3 different environments.

- 1.1 A total of 3 different environments needs to be simulated. Each environment needs to provide at least 3 conditions that can be sensed by the robot.
- 1.1.2 The robot needs to be able of moving from one environment to another.
- 1.1.3 Configuration of the environments (order) must be interchangeable.
- 1.1.4 The robot needs to acquire 3 or more sensor signals that can be use as predictors for supervised algorithms

1.1 Controlled environments

- Hot Room.
- Cold Room.
- Toxic Room.

1.1.2 Robot characteristics

The main features of our robot are as follows:

- MCU Arduino.
- Micromotors DC POLOLU
- PCB
- Battery LIPO 7.4V 300mAh
- Driver motor TB6612FNG
- Bluetooth HC06

1.1.3 Configuration enviroments