

CMPT 399: WS2019 Term Project

School my Bot

Introduction:

Peter Pan the Director of Purchasing recently bought Bots in bulk. He raged about bringing his school up-to-date in the digital age. Unfortunately when Peter turned on the Bots they did nothing but blink. LED blink on, LED blink off. Peter got perturbed with the company where he bought the Bots in bulk but they could not be bothered. Chris the Chair of Computers heard about Peter's problem and suggested a solution. "Perhaps our Computer students could coach your Bots" clamored Chris. Peter agreed and gave the Bots to Chris. Later that night Peter pondered about the wondrous things that the Bots could do on their own.

Goal:

Given the shell of an aluminum 4WD Lynxmotion rover develop a design and build the Bot to perform an intelligent task which includes and uses:

- some circuitry used to communication information
- a wireless "kill" switch
- multiple sensors
- a sensor to perceive its environment in some way
- actuators for the Bot to move around in the environment
- programming to move around the environment on its own without damaging itself
- feedback and control of some system that the bot uses

The Bot should also have a clearly defined purpose and be able to perform some task. Note if you want to create your own structure (instead of the Lynxmotion rover) please get consent first.

Teams:

Students must complete the project on their own or work in a group of 2 (at the most).

Assessment:

Assessment	Description	Worth
Report*	A final report which includes a description of the designs, the designs, and the code	35%
Demo*	A demonstration of what the Bot can do	5%
Presentation*	A 10 minute presentation describing your Bot	5%

*a rubric for each assessment will be provided