

# CS 309

## Autonomous Intelligent Robotics (FRI I)

### HW 4: Starting the Robot Due: March 29, 2018

You can find the latest version of this PDF at  
[http://justinhart.net/teaching/2018\\_spring\\_cs309/homework/HW4/hw4.pdf](http://justinhart.net/teaching/2018_spring_cs309/homework/HW4/hw4.pdf)

In class, we discussed starting up and shutting down the BWI Bot. Details on this process can be found in the Lecture 17 notes. Your job for this homework is to have either the TA or a peer mentor witness you starting up and shutting down the robot. This will proceed in the following steps:

- Disconnecting the robot from the charger.
- Turning on power to the robot.
- Starting the Segway base.
- Booting the computer.
- Logging into the FRI account.
- Setting up the ROS environment.
- Starting the robot's ROS software.
- Using keyboard teleoperation to drive the robot into the hallway.
- Giving the robot a start pose in rviz.
- Giving the robot a 2D nav goal in rviz.
- Running `visit_door_list`.
- Letting the robot visit 3 doors.
- Stopping the robot.
- Driving it back into the lab using keyboard teleop.
- Killing the ROS nodes, shutting it down, turning it off, and reconnecting it to the charger.

You should do all of these things to receive full credit. Because this assignment is fairly easy, it will be only worth half as much as other homework assignments for this class. The idea of this assignment is to familiarize yourself with operation of the robot hardware before performing assignments and projects on the physical robot.

Good luck!