

Tasks & Teleop Exercise

Fall 2021
Class 4



Charlie Kemp
<https://charliekemp.com>

Plans for Today

- Each team
 - discuss tasks proposed by the team members
 - select top three proposed tasks
 - present top three tasks to the entire class
- While two teams discuss tasks, the third team will try implementing their teleoperation code on the robot

Next Three Classes are Guest Lectures with MS Teams

- Caregiving involves [stakeholders](#) and [subject matter experts](#)
 - Your primary expertise will be technical, but that's not enough
 - Talking with others is one of the first things you should do
- Guest lectures will provide important perspectives
 - Healthcare professionals: [Dr. Vy Nguyen](#) ([occupational therapist \(OT\)](#))
 - Healthcare researchers: [Prof. Wendy Rogers](#) and [Dr. Travis Kadylak](#)
 - People with disabilities and their caregivers: [Henry and Jane Evans](#)
- All of the guest lecturers
 - Have used the Stretch RE1
 - Collaborated on the same project with the Stretch RE1
 - Will have distinct perspectives
 - <https://en.wikipedia.org/wiki/Rashomon>
 - https://en.wikipedia.org/wiki/Rashomon_effect



Hopeful Plan

- Three robots for your teams by our class on Wednesday, September 22
- Waiting on Georgia Tech procurement.
- Major lab demo for a sponsor on September 28



Changes to the Schedule

Make sure to look at [the revised schedule](#).

Important: change to proposal presentation deadline

Get Started on Your Slides

[Use the midterm proposal rubric as a guide](#)

[Look at example of final presentation from last term](#)

Go to the robot's home directory for code to modify

```
$ cd
```

```
$ ls | grep py
```

```
prof kemp teleop 20210901.py
```

```
team_red_teleop_20210901.py
```

```
team_green_teleop_20210901.py
```

```
team_blue_teleop_20210901.py
```

```
robot.home()
print('finished calibrating the robot')
```

```
else:
    if first_home_warn:
        print('press the start button to calibrate the robot')
    else:
        first_home_warn = False
```

```
#####
```

```
## Prof. Kemp test
```

```
def prof_kemp(robot, controller_state):
    lift_height_m = 0.75 # lift height goal in meters
    auto_robot = controller_state['left_button_pressed']
    if auto_robot and robot.is_calibrated():
        robot.lift.move_to(lift_height_m)
```

```
# ##### MAIN #####
```

```
use_head_mapping=True
use_dex_wrist_mapping=False
use_stretch_gripper_mapping=True
```

```
def main():
    global use_head_mapping, use_dex_wrist_mapping, use_stretch
```