EECS/BioE/ME C106A/206A

Final Project Presentation/Demo/Report Instructions

Fall 2023

Due Date Reminders

- **Presentations/Demos:** Thu 12/07 and Fri 12/08, Cory 105
- **Reports:** due Fri 12/15, 11:59p, submitted via Gradescope survey

Presentations/Demos

On the final presentation day (12/07-08), each group will give a presentation of their final project. Because there are so many of you, we will be splitting you up into 6 blocks of 8-9 teams each.

Each group will be granted a 12min slot, with 9 minutes for presentation and demo/video + 3 minutes for questions. Timing will be enforced fairly strictly. All team members will be expected to remain as audience members for the other teams in their block. The overall schedule is as follows:

Thursday

8:30a-9a	Breakfast
9a-11:15a	**Block 1**
11:15a-12p	Lunch
12p-2:15p	**Block 2**
2:15p-2:45p	Coffee/Snack Break
2:45p-5p	**Block 3**

Friday

8:30a-9a	Breakfast
9a-11:15a	**Block 4**
11:15a-12p	Lunch
12p-2:15p	**Block 5**
2:15p-2:45p	Coffee/Snack Break
2:45p-5p	**Block 6**

Presentation block assignments have been posted here. Between the slide deck talk and the demo, all team members are expected to have a speaking role in the presentation. Specific expectations for each presentation element are described below.

Slide Deck Presentation

Your presentation should give a brief overview of:

- The original goals for the project as well as your final goals for the project
- What your project does (this will be the bulk of your presentation)
  - The design of your system, ideally illustrated with some diagrams
  - Your implementation

  - Results you ended up with
- Difficulties your encountered
- Improvements/extensions you would make if you had more time

Remember: we will be looking for scope, design, implementation, rigor, and presentation quality! To avoid spending time on laptop/projector troubleshooting, we'll ask you to send us the presentation Google Slides link by 11:59p on 12/06 so that we can collect them all on one computer (you're welcome to keep editing past submission time). The submission form is here.

Demo/Video

The second part of your presentation will be a (working!) demo of your system. While it does not need to be completely polished, you should demonstrate the basic idea of your project on real hardware and show that it is functional. You may instead include a short video if it works better for you (e.g., a sped-up video showing the completion of a usually slow task or if you are not able to bring your robot to the lab). If you're using any other hardware, you'll need to bring it to the demo along with any equipment necessary to make it work (e.g., power adapters). **You shouldn't plan on having much more than the 12 min slot of the presentation before yours to get everything ready to go** and should design your system accordingly. By the same token, **make sure any changes you make to the setup of lab equipment will be easy to undo** to allow the next team using the hardware a clean slate.

Report (website and video)

Your final reports will take the form of a website, the address of which should be submitted to the Gradescope assignment by 12/15 at 11:59p. Your website should show off all aspects of your project, and it should be something you're proud of and can show off during job interviews. Your website should also link to a video demo, in which you show your project in action. You may have one single video or multiple videos; it's up to you.

You may use any platform you like to host the website; Google Sites tends to work the best, although Wordpress, Wix, Github Pages, and Weebly are also good options. You may host videos on Youtube or any other service. Your website should include the following sections:

1. **Introduction**
   - Describe the end goal of your project.
   - Why is this an interesting project? What interesting problems do you need to solve to make your solution work?
   - In what real-world robotics applications could the work from your project be useful?
2. **Design**
   - What design criteria must your project meet? What is the desired functionality?
   - Describe the design you chose.
   - What design choices did you make when you formulated your design? What trade-offs did you have to make?
   - How do these design choices impact how well the project meets design criteria that would be encountered in a real engineering application, such as robustness, durability, and efficiency?
3. **Implementation**
   - Describe any hardware you used or built. Illustrate with pictures and diagrams.
   - What parts did you use to build your solution?

- Describe any software you wrote in detail. Illustrate with diagrams, flow charts, and/or other appropriate visuals. This includes launch files, URDFs, etc.
- How does your complete system work? Describe each step.

4. **Results**
   - How well did your project work? What tasks did it perform?
   - Illustrate with pictures and at least one video, perhaps any graphs as well.
5. **Conclusion**
   - Discuss your results. How well did your finished solution meet your design criteria?
   - Did you encounter any particular difficulties?
   - Does your solution have any flaws or hacks? What improvements would you make if you had additional time?
6. **Team**
   - Include names and short bios of each member of your project group.
7. **Additional materials**
   - Code, URDFs, and launch files you wrote
   - CAD models for any hardware you designed
   - Data sheets for components used in your system
   - Any additional videos, images, or data from your finished solution
   - Links to other public sites (e.g., GitHub), if that is where your files are stored