Final Project
Procedure

Deliverables: Video demonstration of your device, Full lab report, and Presentation via Zoom

There is no procedure for the final project. It is an *independent* design project. The only requirement is that you begin by doing the pre-lab assignment, you show up to every lab on Friday (see lab calendar), and you turn in the deliverables below.

Each group will be given a budget of $1000. All purchases must be made by submitting a PO form to Prof. Rumbach. You must keep a detailed record of your expenditures in an Excel spreadsheet.

Deliverables

Video Demonstration – Please ask a family member or roommate to record you demonstrating the device you built. These videos should be uploaded to the shared folder on Google Drive before **May 6th at 5pm**.

Written Report – A written lab report should be uploaded to the shared folder on Google Drive before **May 6th at 5pm**. The report should be 5 – 8 pages in length and include the following:

- A brief summary section no longer than one page
- An itemized budget listing your expenses
- CAD drawings for any mechanical parts you designed (can go in the appendix)
- Circuit drawings for any circuits you used (can go in the appendix)
- Any important equations you used or derived
- Tables summarizing any important values measured or used
- Figures and plots showing transient behavior of any controllers implemented
- A brief conclusion section no longer than one page
- A reference section with in-text citations

Presentation – Instead of a final exam, we will all meet at **4:15 – 6:15pm on May 7th** via Zoom. Each of you will give a 5 to 10 minutes Power Point presentation. The following components should be in your presentation:

- An overview of the task that you have automated.
- A computer-drawn schematic of the system you built showing the important actuators and sensors.
- Photos and videos of your system performing the automated task.
- A slide discussing what improvements you would make in a hypothetical second round of prototyping.