Final Project
Procedure

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

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 $300. 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 friend or roommate to help you record a demonstration of the device you built. Try to edit the video to include captions and background music when appropriate. These videos should be uploaded to the shared folder on Google Drive before **Wednesday, May 3rd at midnight**.

Presentation – Instead of a final exam, we will all meet at **9:25am on May 1st** in B14 Fitzpatrick. Each of you will give a 5 to 10 minute 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.

Written Report – A written lab report must be uploaded to Canvas **Wednesday, May 3rd before midnight**. 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