Deliverable #0:
Project Idea and Elevator Pitch

1 Objectives

This deliverable is meant as a way for you to begin collecting your thoughts and looking for something fun, interesting, and challenging you would like to build this semester. This will help you organize a team and start exploring what is possible during the semester.

For this deliverable, you will prepare a short document, describing an idea for an embedded system prototype. You will also prepare a 60-second elevator pitch aimed at convincing your classmates that they want to work on your project.

2 Document Details

In the document you submit, you need to try to convince your reader of three things:

1. Your idea is interesting, exciting, or useful.
2. Your idea is achievable in one semester.
3. You are excited about making this idea a reality.

Choose from the categories of embedded systems we talked about in class (Robotics, Drones, Toys, Wildlife tracking, Wearables, Building & Infrastructure Sensing, Gadgets, Gizmos, Games, Pranks and so many others) then hone in on a specific application. Write about it trying to envision a final product.

Your project can be anything you like, but it must have the following features.

- **Custom Hardware:** Your device must contain a printed circuit board that you have designed and tested. Your circuit board must contain
system components and serve a meaningful purpose in your design (it can’t just be providing connections).

- **Custom Software:** Your device needs to have a microcontroller that runs software that you have designed, written, and tested.

- **Wireless Communication:** Your device needs to use a radio (any radio you choose) to communicate information.

- **Sensing:** Your device must use sensing in some meaningful way.

- **User Interface:** Your device must interact with users. In this class, we will define user interface loosely. It could include indicator lights, sounds, or motor responses. The interaction could also be on another device (phone, laptop, etc) that is communicating wirelessly with your device. Remember, that you will demo your device at the end of the semester. Your user interface will be the thing that people see when they see your demo.

An example idea description document is available on the class schedule website. This will give you an idea of what sort of thing I’m looking for. Use this document as a formatting guide, but please use your own creativity in coming up with your idea. The example contains “stretch goals.” These aren’t necessary for this deliverable, but you will set stretch goals for your project. So, it’s useful to start thinking about how to break down the work into essential and nice-to-have tasks.

3 **Collaboration**

This stage of the class project is **not** to be done in groups, students will be graded individually based on what they submit.

4 **Submission Instructions**

This deliverable is due by 4 PM on January 22nd. Absolutely no late assignments will be accepted.

The idea document should be in PDF form (no other format will be accepted) and submitted to handin.cs.clemson.edu. During class on January 23rd, you will pitch your idea to the class, and try to recruit others to work on it. This will be part of how we form groups for the remaining project stages.
5 Grading

This deliverable is worth 5% of your project grade, and will be graded on clarity, completion, and how well your idea meets the criteria above.