

Deliverable #1: Project Ideation

1 Objectives

This deliverable is meant as a way for you to collect your thoughts on finding something fun, interesting, and challenging you would like to build this semester. This will help you begin the organization of a project, and confirm with me what is possible in the time we have this semester.

For this deliverable, you will prepare a short document, describing your idea for an embedded system prototype to me.

2 Document Details

In the document submitted, you need to convince me of three things:

1. Your idea is interesting, cool, 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, Wildlife tracking, Wearables, Building & Infrastructure Sensing, Gadgets, Gizmos, Pranks and so many others) then hone in on a specific application. Write, about it, trying to envision a final product. Keep in mind that your project must have a microcontroller (computation), a radio (communication), an analog component (sensing, motors, sound, etc), and have a visual aspect to make for a cool demo.

In addition to the idea description, describe 1-3 “stretch goals” that would be nice to have, but are not essential to the project. These are project extensions that you may attempt to implement if you have time, or you might try after this class is over.

An example idea description document is available on the class schedule website, this will guide you in creating your own idea document, start with this format, and then improve on it.

3 Collaboration

The class project is **not** a group project, students will be graded individually based on what they submit, build, test, and finally, demo. However, if you are interested in collaborating with others on a project together, that is fine. Just remember you are responsible for your own grade, so organize appropriately. Make sure your hardware / software / firmware does not depend on someone else's. If you choose to collaborate with others on a larger project, your part must still satisfy the three things listed in the previous section.

Potential candidates for a collaborative project could be: a battle-bot, a search and rescue drone (air, or land), instrumenting a smart building, etc.

4 Submission Instructions

This deliverable is due by 11:59 PM on September 3rd. Absolutely no late assignments will be accepted.

The idea document should be in PDF form, no other format will be accepted. Email this document to **jhester@clemsn.edu**. I will read your document and provide feedback based on how the document addresses the three things listed in "Document Details".

5 Grading

This deliverable is worth 10% of your final class grade.

Turn the document in on time in PDF format and you get a 100%. If it is not turned in on time, or it's not a PDF you will get a 0%.