

EC535 2025 Final Project Grading Criteria

Item	Grading	Score	Comments
Demo/ presentation	Successful project completion, performance of the demo, consideration of system as a whole, video.	20	What was the level of technical accomplishment for this project, the presentation sufficiently shows the project.
Technical Report	Written report to be submitted on 5/1.	70	Clarity, organization, and completeness of figures, diagrams, see below.
Git/commits	Completeness and adherence to weekly commit schedule	10	Commits by both team members, starting to work early (two weeks prior to presentation).

Total: 100

The goal of the final project is to show understanding of concepts from the class and implement into an integrated system that consider functionality – some task needs to be achieved, e.g., autonomous vehicle responses on time and arrives to a goal, user interface enables task completion, etc. The project should draw on concepts in embedded and resource-constrained systems. Project examples can be found here:

<https://docs.google.com/document/d/1oCxSCoXTv5vd8RuECxYzig5Jnyiyxf6Fi64txKUYcOM/edit?usp=sharing>

Example report can be found here:

<https://drive.google.com/drive/folders/1D5XTPkQXZXrXm9T4qOLDZvu1a7rzL6L?usp=sharing>

Overall / Video (5 minutes):

Please produce a video showcasing your project. In this video, you should show the totality of your project:

- Provide an executive overview of your project – what it is designed to do, why, etc.
- Walk through building and deploying your project (30 seconds)
- Talk in great detail about your technology stack, and show that you understand why you are using the tech. For instance, “I push this button, it is captured by the kernel module that I wrote, which then calls the userland application to do ...”
- The video doesn’t have to be polished, but it should have great detail about the technical stack and the technical work that went into the project: project overview, method, results and examples, and conclusion and future work.
- Please put the video in your github repository and upload it to YouTube as an unlisted (not private) video.
- In class presentation logistics and details will be released closer to the deadline.

Technical Report (minimum 4 pages):

The report should contain:

An abstract: a paragraph with describes the research problem, and an overview of the planned project (5 pts).

An introduction: well-formed motivation, background information (10 pts).

Method: Method used is clearly explained, with your contributions, if you used ideas from our class readings or other materials, make sure to detail in the report. Your report should still be self-contained by including the used equations and formulations necessary for understanding the approach, any algorithms. The method should be well justified, and consider complete system usability in the real-world (20 pts).

Results: Experimental setup should be clearly explained. Was any data used, evaluation protocol and metric definition details, are the experiments well justified, analyze the system comprehensively (with quantitative and qualitative results) (30 pts).

Limitations and future work: Discuss what didn't work, e.g., if different from expectations, what wanted to implement but didn't have time (e.g., to further tune), conclusion (5 pts).

Additional items to consider:

- Aspects of the project which were not implemented and why (we ran out of time is not a good reason for why a project doesn't work). Focus on specific reasons.
- Aspects which were implemented but not in original proposal, maybe you did something beyond the scope of your original project, or you had to change a component that was in the original project.
- Show a software/schematic/network architecture of how things are interconnected
- References to papers, websites, etc.
- What (technical skills/knowledge) did you learn from your project?

Git/Commits:

Please create and add me to your git repository. I am <http://github.com/h2xlab>

Due date:

This assignment is due at the midnight of our final class. All final project files needs to be committed to Git. Your project report and video need to committed to blackboard (if the upload size is too much, put on Youtube and give a link to the unlisted video in your project report). Also give a link to your git in the project report.

What to Hand in:

- Please hand in the FinalVideo.mp4 (or other video format) in your Git repo, uploaded to the Blackboard Learn website and also an unlisted YouTube.
- Please hand in the TechnicalReport.pdf in two places: In your Git repo, and uploaded to the Blackboard Learn website.
- Of course, the last state of your code should also be reflected on the Git repo at the beginning of the last class. Please make sure that everything is committed on either the Master or the Develop branch as of midnight of the last day of class. Anything on any other branch will be ignored, and only the latest between master and develop will be graded.