University of North Texas, College of Engineering
Department of Electrical Engineering

EENG 3910: DSP System Design Project

Final Project

Assigned: Monday, 10/16/2023

1. Final Project Description

The final project is a group project with 2 - 3 members per group. In final project, you are required to make use of the knowledge that you have learnt in this class to design and implement an embedded hardware and software system. Design projects typically involve integration of sensors and actuators with the Nucleo board to implement certain sensing, processing, and control applications. You are encouraged to talk to the instructor about your project idea.

2. Final Project Deliverables

The deliverables of final project include project proposal, project presentation, and project report. The final project presentation will be about 10-15 minutes long, which is equivalent to about 20 pages of PPT slides.

In the project proposal, you should clearly describe:
1) Background, Motivation, and Project Definition
2) Project Goals and Objectives
3) Preliminary Design and Work Plan
4) Project team members, and workload assignment and distribution
5) Project Timeline

In the final project report and presentation, you should include the following sections
1) Background, Motivation, and Project Definition
2) Project Goals and Objectives
3) Detailed Design and Implementation
4) Testing and Results
5) Video demo of your design and results
6) Project team members, and workload assignment and distribution
7) Summary and Analysis
   - Relation to the materials learned in this class
   - New knowledges acquired and lessons learned
   - Challenges and issues (both solved and unsolved)
   - Future work
8) References

3. Important Dates

The following are the important dates for project deliverables:
- Oct 30, Monday: Final project proposal due.
  Submit the **project proposal PDF file** in Canvas.
- Pre-finals week, Dec. 4, Monday, 1:00 – 4:00 pm: **Final project presentation**.
  Submit the **PowerPoint presentation file** and **demo video** after presentation in Canvas.
- Finals week, Dec. 11, Monday: Final project report due.
  Submit **final report PDF file** in Canvas.