

Project Guidelines

General Rules

1. The project can be a hardware application or simulation of a system using Matlab for programming.
2. Each project should include at least three topics covered in the class. For eg. FFT, modulation and filters.
3. The Project should reflect at least 15-20 hours of work.
4. A project report should be submitted at the end of semester on canvas. It is due on the final exam day of the class by 5pm.
5. A presentation of the project with about 10-15 slides should be presented in the class/ to the instructor.

Project Report

The report should follow the following template:

1. Introduction
2. Theory – Description of the theoretical concepts involved in the project
3. Simulation – Describe the steps involved in simulation
4. Result – Figures with comments
5. Appendix – Code

Project ideas

1. FFT Algorithms
2. Analyze, design and implement 1-d analog/digital filters
3. Analyze, design and implement 2-d(image) digital filters
4. Communication systems (AM, FM, PM)
5. Musical instruments tuning
6. Simple speech recognition
7. Popular theme song tunes