Lab Project

Instructor: Theodoros Anastasiadis

Due December 5th on Blackboard by 5:00 pm.

Recall that the average of all your homework assignments accounts for 85% of your total grade and this project accounts for the remaining 15%.

This is not a small and easy assignment like the majority of the ones you completed during the semester. It is not super hard but it requires more time and effort on understanding the topics.

There is no way that you can get an extension on this assignmment. You are given almost one month to complete it. This is 15/100 of your grade!!! If you risk and start working on this project 3 days before the due date, then this is your mistake.

If you want (and only for this project) you can work in groups. Each group should consist of 1-4 students. If you choose to work as a group , then all members of the group must submit the same file on Blackboard which must contain all the names of the students who are members of the group.

The objective of this project is to work with some interesting applications of linear algebra. Choose **one** topic and answer every question in that topic.

Solving the problem via MATLAB is highly encouraged but you are not required to turn in your code. I expect Matlab to be used mainly as a calculator for matrix operations , solving systems etc. You must explain how you implemented MATLAB .

Grading

The paper must be at least 2 pages long (don't worry that won't be a problem), double spaced. If you choose to submit a handwritten file , then it still needs to be double spaced , organized and readable!! Make sure that you scan your file properly, so that it is easy to read on Blackboard!!

The grading rubric is as follows:

1. **Background (25 points)** This is a discussion of how the mathematical and non-mathematical portions of your topic fit together. The

objective here is to discuss which information is needed in order to do the associated problems and how linear algebra fits into the picture. You might include the definitions of words, the linear algebra concepts used (i.e., matrix multiplication, solving linear systems, etc), and some explanation about why these ideas were useful.

2. **Solutions (60 points)** You must include the solution to all problems in the project description. Don't just give answers, a full detailed explanation of what you're doing at each step is required.

3. **Organization (10 points)** Is your report readable and easy to follow?

4. **Bibliography (5 points)** List the references used to complete the report. You may use your favorite style guide for the bibliography. *You are required to include at least one reference.*

Any questions about the instructions or grading of the project should be brought to me as soon as possible.