

PROJECT 1 – Systems of equations

Groups

For this project, you will be working in groups of 3. I will assign the groups based on availability. Please fill out the attached poll with your availability to work on campus:

<https://docs.google.com/spreadsheets/d/1XIHNgdtb4hdXXyc4LEoQIzT6TiPNdyGtqwxdkBPQLU/edit?usp=sharing>

Use an x to indicate times when you are available to work on campus.
Groups will be assigned on Tuesday

Assignment

Each group has 2 roles, which I will cover separately

Customer

You must think of an application of either

- a) Linear systems of equations
- b) Eigenvalues/Eigenvectors
- c) Non-linear systems of equations

that you want to see solved. You must take this from a real world or class example from the 200 level or above.

You will write up a short report with a request to solve the problem along with additional requests that may be appropriate (e.g. plots, figures,

comparisons, other analysis). In this report you should highlight the problem in general and request specific examples to be solved. You will NOT be solving this problem

Consulting Company

You will receive a customer request from another group and solve their problem! You will submit a final report which addresses their question, solves it, and provides all analysis requested. Plots, figures, and/or tables of solutions and the problem are appropriate here.

I encourage you to treat this as a real job that you would get paid for only if the customer was satisfied with your work. The first page (after a cover page, if you wish) of your report shall include the prompt you received from your customer.

Assessment

This assignment will have 3 portions to the grade.

1) Your customer prompt (30%)

Your prompt should be detailed and specific, making a request of physical relevance and of interest to you. Or at least, I hope it is interesting to you.

2) Your consultant report (70%)

Here, you will be graded on accuracy, completeness, clarity, and presentation. Address the customer's request completely, and provide the necessary information they would need to see you adequately solved the problem

3) Participation

You will be graded on participation as judged *by your group members*. Your group will be assigned a grade based on the categories above, and then you will be assigned an individual grade based on the feedback I receive from your group mates. You will have an opportunity to assess your own contributions as well, and communicate that to me.