

General Turn-in Instruction

To complete this homework set, you are required to do the followings. Your work must be typed in \LaTeX using the course presentation template. The progression of your midterm presentation is to be “recorded” by making a git folder specifically for this midterm presentation homework set. The burden of proof is on you, and if your git commit history is sparse, then you may be liable for a penalty. A paper copy of the PDF output of your \LaTeX file is to be submitted to your instructor in class on the due date. *After* submitting the paper copy, but *before* the end of the due date, you will upload your work to your github by making a remote repository specifically for the homework, and post the link to the repository at the designated *Discussion* forum in Blackboard by making a thread just for you. The repository name in your github should be `550400.workstatement.final` and the discussion forum thread should be named `YourFirstNameMiddleInitialLastName`, e.g., `BarachHObama` and `WillardMRommey`. You have till the end of the due date to finalize your github repository. However, any commit made after the class time of the due date will be inadmissible. Finally, upload your video file to *your* Discussion Forum thread, i.e., `YourFirstNameMiddleInitialLastName`. *Your attention to details in following this instruction will be critical, and if not followed exactly at the time of collection, the homework set may be graded at 90% of the full score.*

Midterm Presentation*

A major component of this course is training and practice in giving good talks, presenting orderly information in a short time. It is an art form requiring practice and discipline. You will want to be good at giving a talk by the time of your midterm presentation. Public speaking is, for many, an intimidating experience at first, so it helps to have an orderly process for getting used to it. Here are some suggestions on how to prepare a presentation. The secret is repetition. The idea is to hold regular practice sessions within your team, paying attention to timing and structure. And don’t worry about it if initially you mumble and fumble. Practice makes perfect!

Your particular assignment in this homework set is to prepare a 20 min talk about the project that you wrote in the work statement. This has two parts:

- making beamer/ \LaTeX presentation slides,
- making a presentation video of giving a talk.

What I meant by making a presentation video is that you should make a movie file in format such as `mpeg` or `avi` so that the screen shows the slide that you are currently explaining in the background. You do not need to make it so that you actually appears in the movie but I do not prohibit you from doing so.

You should make your recording as good as possible, and try multiple times before finalizing the recording. How would you make such a video recording? For OSX, QuickTime Player does make a simultaneous recording of voice and screen, and it comes with OSX by default. You can

*Some of these materials are from [3].

find it under the usual Applications folder. Unfortunately, for Windows, QuickTime Player does not come with the same functionalities as the OSX version. However, there are many free softwares that will satisfy your needs. An example of such a software can be found in the following webpage (<http://camstudio.org>).

The time requirement is strict in a sense that you should not go over 20 minutes. Making it exactly 20 minutes is hard. To give you a sense of what is being considered acceptable, I would say 18 or 19 minutes are okay if your presentation naturally breaks there, but 15 minutes would be too short for any case. If you find yourself that you do not have enough materials to talk about beyond, say 15 minutes, then that probably means that you have not given your project a serious consideration.

Roughly speaking, the contents of the talk should be a presentation version of the work statement and any preliminary progress you have made in your project. A template for formal presentations is shown next. Don't go overboard in preparing colorfully dynamic and impressive graphics—except to the extent that the graphics help directly to explain the technical material and purpose of the project.

- INTRODUCTION (5 minutes, approximate) (crystallized introduction, clarity for average listener)
 - Title, sponsor identification, participants
 - Sponsor's business, relevance to problem area
 - Description/explanation of problem
 - List of deliverables
- HEART OF TALK (10 minutes, approximate)
 - Team's approach, in descriptive non-specialist language
 - Research accomplished – discuss analysis/results – oriented toward specialists
- CONCLUSION (5 minutes, approximate)
 - Check against list of deliverables
 - Discuss work remaining to be done, negative results
 - Recommendations for future research

Appendix

It is important to understand how others view your presentation, whether your points are clearly expressed and convey the essence of your project adequately. There are many dimensions (or scales) on which a talk can be judged.

For the style guide for your presentation, please see Chapter 15 (Speaking about Multivariate Analysis) of [2]. In addition, the following list[†] suggests some dimensions that can help you evaluate your own talk and guide you in making suggestions to others.

- Dress: Are presenters wearing suits or similar clothing of professional appearance?

[†]This list is the same one in [2] which itself is due to Prof. Robert Wolf of Harvey Mudd College.

- Introduction: Do we learn who the speaker and other team members are? Do we understand who the client is and what its business is?
- Problem Statement: Do we understand the problem presented to the team and how it fits into the clients business? Do we learn why the problem is important?
- Objectives: Are the objectives of the clinic clear? Is what constitutes a solution clear?
- Constraints: Are the constraints on the clinic objective clear? Are there cost, quality, performance, accuracy, reliability, usability, or other constraints?
- Approach: Do we understand the approach to be used in reaching the project objectives? Is the reason for the approach clear? Is the sequence of activities clear?
- Alternatives: Has the team studied alternative approaches to reach a solution of the problem? Have all plausible alternatives been considered? How were the alternatives evaluated?
- Evaluation: Have the criteria for ranking and evaluating solutions been explained? Is there a metric? Do the ranking criteria meet the objectives and constraints?
- Budget: Is the budget for the project clear? Is it complete? Realistic? Achievable?
- Schedule: Is there a detailed schedule of work, with milestones and personnel identified? Is the time line, grant chart, or pert chart useful for detailed planning and assessment of the teams progress? Can it be modified to deal with delays?
- Deliverables: What exactly will be the deliverables for the project to the client?
- Acknowledgments: Have the liaison, adviser, consultants, and staff been recognized for their efforts?
- Questions: Have the team as a group responded adequately to the questions asked? Did they seem receptive to advice? Were the questions repeated for clarity?
- Visuals: Were the slides clear, not cluttered, and attractive? Did they give adequate information?
- Speaking: Did the students speak clearly and confidently in standard English? Was the talk well organized? Well paced? Was the logic clear? Were all the important points covered in adequate detail?

If your audience is satisfied on all these points, you have made an excellent presentation!

References

- [1] E. Bender. *An Introduction to Mathematical Modeling*. Dover Publications, 1978.
- [2] J. Miller. *The Chicago Guide to Writing about Multivariate Analysis*. The University of Chicago Press, 2005. [2](#)
- [3] M. Raugh. *UCLA IPAM RIPS Manual*, 2012. [1](#)