L4 Project Guidance

John H. Williamson

Meetings

Group and individual meetings

- Meetings will alternate weekly between:
  - 30 minute individual meetings and
  - 90 minute group meetings (with six students)
- Group meetings let you share ideas with other students and calibrate your progress.
- If you need an additional individual meeting in a group meeting week, then we can arrange this as required.

Attendance

- Please let me know if you are unable to make a meeting so we can rearrange. Meetings are usually scheduled back-to-back, so if you are late meeting time may be truncated.
- I will occasionally not be able to make a meeting. I will let you know in advance so we can rearrange.
- Do not miss more than two meetings in a row.
- If you have nothing to report, please still come to the meeting.

Preparation and presentations

- Please prepare a short written summary of what you have done in the previous week and email it to me **24 hours in advance** of every meeting.
- You should take written/typed minutes of a meeting.
- I am happy for you to record individual meetings. Please ask other students before recording in a group meeting.
- At the start of each meeting (group and individual), you will be asked to make a short presentation, with slides. There should be four short slides; you can obviously add more if you have something else you want to show, like results:
  - What you did last week.
  - What questions you have.
  - What your plan is for next week.
  - Where you are in the overall schedule.
- Make a slide with a week-by-week plan (for slide 4) and update it each week.

Dissertation

- Download the dissertation template now and fill in your details.
- Start using a reference manager **now**. Keep **all notes** on documents you read in the reference manager.
- Read the Hall of Fame projects carefully at the start of the project.
- The earlier you provide drafts of writing the better feedback I can give.
- I will not be able to provide anything but the most basic feedback in the last week of the projects. **Submit drafts early.**

Code

- All code must be under version control. Use `git` unless you have a strong preference. `GitHub` offers free private repositories, as do other providers. Keep local backups as well (e.g. on CSCE storage).
- Please add me as a contributor (read-only is fine) if you can.
- Be ready to demo what you have implemented. If possible, make sure that I could (e.g. in a meeting):
  - clone your repository
  - build the software
  - and run what you've got

Data

- If you run simulations to generate data, **automate them**.
  - Write robust, repeatable scripts that generate the results.
  - Store configuration parameters in files.
  - You can use tools like **papermill** (to make parameterisable notebooks) or **sacred** and **omniboard** (to adjust parameters and store results). There are many other tools.
  - Any result (graph, number) that appears in your dissertation should be reproducible from your code.
- If you will work with human subjects, check the ethics checklist at the start of the project to make sure it will cover you.
- Never modify captured experimental data. Experimental data is **immutable**. Write scripts to process data into massaged forms for analysis.