Introduction to MSc projects

Week 6, MT 2024

Overview

- This session is a general introduction to projects, especially including information on how to get a project.
- There will be a further session in HT/TT about carrying out a project, including information about writing a dissertation.

The MSc Handbook, Section 3.5 on “The MSc dissertation project” contains many written details about projects – the handbook is the official source of such details.

Some of these are summarised here.

There are also some other details here.

Supervisors

- It is usual for your project supervisor to be different to the departmental supervisor you have during MT/HT.
- The number of project supervisors is usually quite a lot larger than the number of departmental supervisors.
- Most students will change supervisor for their project.

How to get a project

There are two ways:

1. Propose your own project – this means you need to find a supervisor willing to supervise it (usually someone in the department). You are encouraged to propose your own project!
2. Get a project from the list of projects that the department will make available – this means you will need to submit your preferences for the projects on the list (not just your first choice, you need to rank lots of the project descriptions) and then an allocation will be made.

Proposing your own project

- Students proposing their own project is the norm rather than the exception – in the past more than 50% of students have proposed their own project.
- So this should be the preferred method of getting a project for more than half of you.

Getting a project from the department's list

Here are some things to be aware of:

- Although the list will contain a range of projects, there are no guarantees about which topics/application areas will be on the list.
- There is no guarantee that projects on the list will match your interests, each year there are students who dislike most (/all?) projects on the list.
- We always try our best to allocate students a project from their top choices, but this may not always be possible, especially if some projects are extremely popular.

Proposing your own project now is a way to deal with these issues.

Project proposals may be shared

- Project topics may be shared by up to 3 students.
- The projects are individual; supervision meetings are also individual meetings **except** perhaps the first meeting.
- Shared proposals will have sufficient breadth to allow for a number of different directions to be explored.
- Projects proposed by students in conjunction with a supervisor, assuming all parties agree, may also be advertised in the departmental list. In this case the student involved in the proposal will be *guaranteed* this topic, and the topic may also be assigned to up to 2 additional students.

Project descriptions

Whether you propose your own or choose from the departmental list, the description of a project is approximately the same:

1. Title
2. Supervisor
3. Description of the project (including at least one reference)
4. Prerequisite courses/knowledge
5. Computing required? Level of programming skill: low/high?
6. Data available?

Proposing your own project

Your proposal must:

- Be on a suitable topic and at a suitable level for the MSc in Statistical Science.
- Have the agreement of a named supervisor who is willing to supervise you on the project.
- Warning: be patient when approaching supervisors and don't always expect a response.
- Your proposal will then have to be approved by the department.

Proposing your own project

- For students who wish to propose their own project, the deadline for submitting the proposal will be: end of HT week 3 (tentative)
- Proposals will be considered by the department's Teaching Committee – the committee needs to approve a proposal before it can go forward as a project.
- Once a student-proposed project with an associated supervisor has been approved, the student will be notified and that student is guaranteed to get that project and doesn't participate in the process of getting a project from the departmental list of projects.

Proposing your own project

Two possible approaches are:

- Identify a broad topic and look for a supervisor willing to supervise you.
- Identify possible supervisor(s) that you are comfortable with and ask if they have possible projects.

- Note that each supervisor can only supervise a limited number of students, most supervisors will only be able to supervise 2-4 students.
- So the earlier the better for looking to propose your own project.
- You may already have ideas.
- Otherwise, looking at web pages, Google Scholar, etc, for recent publications of members of the department should provide you with some ideas.

Departmental list of projects

- Proposals on the departmental list will be approved by the department's Teaching Committee before the list is circulated to students.
- The list may be available between late HT and early TT.
- You will be given plenty of time (e.g. 2-4 weeks) to submit your ranked preferences for the various projects on the list.

Departmental list of projects

- Once the deadline for submitting preferences has passed, an allocation will be made and students will be notified.
- Students cannot be guaranteed to be allocated to a particular project on the list, the department will do its best to match student preferences to the projects available.
- Clearly it is not possible for everyone to get their top choice - this is why you must submit lots of project you are willing to do, and not just your first, or first few, choices. We will need at least 10 choices.
- There is a small probability that the department will need to ask some students for additional preferences if most students have the same initial preferences.

Departmental list of projects

- All preferences submitted by the deadline for submission of preferences will be treated equally.
- However if you submit your preferences after the submission deadline you can expect that many projects will already have been allocated and you will be allocated a project from those that remain.
- All students should have an allocated project by early in TT.

Carrying out projects

- The period for project work is primarily from June until early September. (Submission deadline = 12 noon on Monday 8 Sept 2025.)
- The dissertation you write on your project is 25% of the 12-month MSc, so corresponds to approximately 3 months of full-time work, so is unlikely to be compatible with any summer internship.

From the MSc handbook:

"Students should expect a maximum of six meetings in which progress is discussed, and for the supervisor to read one or two drafts of the dissertation. Please be reasonable, and allow a week or so for work to be read; this is particularly important in planning final writing."

Carrying out projects

- Responsibility for the project lies with the student. Your supervisor will aim to provide guidance but the project is your responsibility.
- It is not the supervisor's job to undertake computer programming (or to debug code) for the student.
- Supervisors will probably not be available for the whole of the period June-September. You should plan accordingly.
- Supervisors will likely need at least a week to comment on any draft version of your dissertation. You should plan accordingly.

Marking

From the MSc Exam Conventions:

“Each dissertation will be marked independently by two examiners or assessors. Normally the first of these two markers will be the dissertation supervisor. Using a standard form, the supervisor is asked to comment on the performance of the candidate throughout the project and on how much assistance was given. The second marker will see this form before submitting his/her marks. The form will also be available to the examiners.”

Marking

Display on screen:

- Marking Grid (p32 and 34 of MSc Handbook)
- Standard form to be completed by supervisors

Information in the MSc Handbook

There is a lot of important information about projects/dissertations in the MSc Handbook:

- Display on screen p24-30 of the handbook.

Python

- For some computational/ML projects you may need Python
- Some tutorials for this particular type of application can be found at: https://scikit-learn.org/stable/tutorial/index.html
- Also the university IT services offer some general python courses