CM50175
Research Project Preparation

Picking a Project;
Reading & Citing Literature

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Picking a Supervisor – Basics

- Do you share interests?

- Do they have more than one project you're interested in? (Say so!)

- Are they open to your project? (if you have one!)

- Are you likely to communicate well?

- How much supervision do you need? How frequently?

Picking a Supervisor – Strategic

- Has everyone else chosen them too?

- Has *no one* else chosen them?

- What do you want to do after you graduate? (project, not supervisor)
  - Expect to reuse your project and/or dissertation!

Picking a Project – Type

- Demonstration.

- Literature: Other people's evidence.

- Formal / Proofs.

- Experimental:
  - Average, best & worst case performance with various features.
  - Usability: user studies of your system.
  - Evaluations: e.g. how long it took *you* to understand packages or APIs.

Project types: What they take

- Demonstration:
  - Programming, documentation.
- Literature:
  - Reading, critical writing.
- Formal / Proofs:
  - Mathematics, careful thinking, feedback.
- Experimental:
  - Organization, a little of everything.

Picking a Project – Type

- Note: these are *not* mutually exclusive!
  - Demonstration.
  - Literature.
  - Formal / Proofs.
  - Experimental.
- However, many projects emphasize one or another thing more.
- Don't be afraid to learn new things!

Reading & Citing Literature

- Why Bother?
- Plagiarism.
- Citations.
- Quality of Source.

How Literature Research Helps You

- Provides data you don't have time to gather.

- Provides arguments you haven't had time to think of.

- Shows you what other people currently find relevant.

- Shows you what other people currently find useful.

How Literature Research Helps You

- In short, a literature brings you into a community.

- It provides you with their knowledge, experience and possibly wisdom.

- It gives you clues about how to become a valued participant in that community.

Plagiarism

- Definition: *Plagiarism* is whenever you use anything from another source *without acknowledging that source*.

- Plagiarism is not just copying!

- You can plagiarise *without* using copy and paste!

Referencing and Citation: The Importance of Saying Where you Got Your Ideas

"Iraq's declaration even resorted to unabashed plagiarism, with lengthy passages of United Nations reports copied word-for-word (or edited to remove any criticism of Iraq) and presented as original text."

Dr. Condoleezza Rice
Why We Know Iraq Is Lying,
New York Times, January 23, 2003.

Referencing and Citation: The Importance of Saying Where you Got Your Ideas

"I was a bit disenchanted because they never cited my article... any academic, when you publish anything, the only thing you ask for in return is that they include a citation of your work... There are laws and regulations about plagiarism that you would think the UK Government would abide by."

Dr. Ibrahim al-Marashi
quoted in The Times (London), February 7, 2003

Plagiarism

- Definition: *Plagiarism* is whenever you use anything from another source *without acknowledging that source*.
  - ideas,
  - data,
  - pictures,
  - texts.
- Plagiarism is not just copying text!

Plagiarism

- *Plagiarism* is using anything you've found *without acknowledging its source*.

- Finding material from other sources is good, but:

  - you must say where it came from, *and*

  - contribute material of your own.

  - E.g. analysis, critique, summary, filter.

Plagiarism

- *Plagiarism* is using anything you've found *without acknowledging its source*.

- Finding material from other sources is important, but...

- If you are found guilty of plagiarism, then you won't get your degree.

Citations: Style

- Use author's name, year reference style (Bryson, 2007).

- "If you have a direct quote or picture, you should include a page number," (Bryson, 2007, p. 17).

- If you want to use a reference as a noun, refer to the authors, not the paper. Bryson (2007) says so.

References: Style

- See library handout for proper format.
  - Don't leave out any standard information.
  - author, title, publisher or journal, volume & issue (if journal), address (if book or conference.)
- Every entry in the bibliography should be cited in the text, and *vis versa*.
- Never use a URL unless there's no option.

Citing URLs

- URLs are generally *not* considered good academic sources.
  - Not *peer reviewed* (so similar to magazines or books.)
  - Not permanent (so worse!)
- If a paper appears on the web *and* in a journal, only reference the journal.

Citing URLs

- Sometimes you must cite a URL.
  - Project page for a software tool.
  - Source of quote that gives `color' (not data) for your dissertation.
- Treat it like any reference!
  - Try hard to find the title, author, address of organization, date the page was written.
  - Iff no date, use imprint time instead.

How Good is that Source?

- Good journal articles are best.

- Good conferences also have several reviewers, but

  - only have a short time to review, and

  - may be no check that the authors conform to the reviewers' requests.

How Good is that Source?

- Some conferences have little or no reviewing.
  - In many fields, conferences are based only on an abstract.
  - Have special journals for incremental results.
  - In AI and CS, some conferences are considered as good as leading journals.

How Good is that Source?

- Conferences continued...
  - Examples of good conferences from my field: IJCAI, AAAI, Cognitive Science, NIPS.
  - SIGRAPH accepted only one in seven papers last year.
  - Still, even the best conference has less reviewing (no cycle) than a journal.

How Good is that Source?

1. Good journal articles are best.

2. Good conferences.

3. Book *proposals* are reviewed
   - by publishers, editors, sometimes external experts.
   - But books are not really peer reviewed.
   - Magazines, newspapers and the web expose you to ideas, but unreliable.

Exceptions

- Some Journals *aren't* good.
  - Check impact factor, board of editors, your supervisor.
- Some excellent journals are now on line!
  - They will still have volumes, numbers & page numbers for articles.
  - Reference them conventionally (not by URL).

Summary

- Picking Projects
  - Picking a Supervisor.
  - Picking a Type of Project.
- Reading & Citing Literature
  - Why Bother.
  - Plagiarism.
  - Citations.
  - Quality of Source.