COMP 516
Research Methods in Computer Science

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Lecture 15: Essay writing

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The format of your essay

- sections should be of roughly equal size
  sections that are reasonably balanced are easier to read

- figures & tables should have a caption
  and must be referred to in the text

- footnotes are problematic because the reader is distracted by jumping to the bottom of the page and back to the main text

- remarks in parentheses tend to distract and should be used sparingly; they can often be omitted, or the parentheses removed

The introduction: the most important section

- for longer technical documents, most readers never go beyond it

- if the introduction is good, they may feel encouraged to read on

- the introduction is also the hardest part to write, and has to be rewritten several times

- good rule structuring arguments: answer sequences of what - why - how questions

- always state what you are talking about first before justifying it or diving into details

The introduction: common mistakes

- Exaggerated claims, which may sounds naive

  Adopt a neutral tone, and remain careful and factual

- Assuming too much knowledge from your reader

  You have immersed yourself in the topic, but your reader has not

  Be aware of that, and explain and introduce your topic in a comprehensible way

- Unclear medley of exposition, subject history, and related work

  Deal with these aspects separately, postpone exposition

  State early what you do in the essay

The references and citations

- mandatory that you cite your sources; otherwise, you plagiarise

- do not present something obtained from someone else as new

- also avoid making that impression inadvertently

- if you use someone else's wording verbatim, say so explicitly

  "The following definition is taken verbatim from [X]."

- any cited work must be referred to in the main text

- on the other hand, you only have to cite those works that are relevant for your work, not everything that you have read

The references and citations

- the bibliography is one of the first things a reader looks at

- it places your work in context

- an expert reader will recognise familiar references quickly, and also notice omissions

- a non-expert reader may appreciate the bibliography as a way to learn more about the topic

- a good bibliography indicates your command of the subject

- $\rightarrow$ the bibliography provides an excellent opportunity to make a good first impression

- so care about the details, and about what you cite

The writing process

- main writing effort goes into organisation and re-writing

- it is impossible to write a perfect essay in one go

- you have to start somehow, and will produce a version that you do not like

- however, you need that mediocre version as a basis for writing a better one

- you should enjoy writing and re-writing rather than being annoyed about it

- what you throw away counts as much as what you keep, because it improves the quality of your text

The writing process

- writing can be viewed as organising material, down to the organisation of the words in a sentence

- you have to bring a tangle of ideas into a linear sequence

- each sequence of thoughts should follow a logical connection, with not too many jumps

- try to make a point, e.g., explaining a concept, only once in the main text

- this forces you to think about the best place to make that point

- important things you will have to say twice

  the first time in the introduction where you have to be brief

  and a second time in the main text

What do I want to say?

- in most cases, when you get stuck when writing, you do not know exactly what you want to say

- make that idea clear in your mind first, then write it

- often, you can be unhappy with a piece of text because one thought led to another, but you wound up somewhere unintended

- if you know what you want to say, then you know early if you are going in the right direction

The writing process

- dedicate one paragraph to one topic at a time

- get directly to the point

- do not worry too much about gluing the new paragraph to the previous one

- a clear structure holds the text together, not phrases

- the resulting paragraphs will become "modular" and can typically be moved around easily

- get into "writing mode" where you are agile and write and re-write quickly

After you have produced a first version

- you won't like some things, and may be happy with other parts

- "I don't like it" is a useful impression that you should analyse rather than persuading yourself of the opposite

"I don't like it"

- have you adopted the wrong tone?

- are there conflicting goals in a certain piece of text (e.g., two different types of audience)?

- are you getting lost in details on a side point?

- do you need a new piece of terminology here and should you introduce it much earlier?

- most of all, does what you say make sense?

- frequent "cut and paste" by computer can produce incoherent writing; it is often better to re-write

Revise

- you may have to scrap some parts of your draft and start over

- remember that the final product counts, which tends to be good only if you throw things away

- other parts of your text may be at the right place and may be roughly right

- revise them as well

- shorten sentences by micro-organising them so that, e.g., a concept is introduced at the end of a sentence where the next sentence can pick it up

Revise

- cut fluff such as "it can therefore be observed that"

- shorten long and pompous phrases; compare
    - "initial impressions can have an extraordinarily powerful impact"
    - "first impressions matter"

- polish sentences so that they can be read without stumbling

- avoid false leads

- often, a word or phrase can suggest another meaning that is not intended, forcing the reader to re-read

The final version

- your final version should scan well

- the reader should feel informed after a first look

- the first sentences of each section, and in the same way the first words of a paragraph, should give an idea of what is coming

- be explicit about the logic of your argument, so that the reader can follow it even without checking the precise details

- imagine someone reading your work at midnight on the underground train

- in contrast, your text should not read as if it was written at midnight on the underground

- if it reads effortlessly, your readers will notice its quality and appreciate the effort you have put into it

Tips:

- Leave plenty of time for proofreading.

  Catching glaring errors can often dramatically improve your grade.

- Try reading your essay out loud.

  Hearing the flow of the sentences can often help to catch mistakes.

  Get feedback from a friend.

Books aren't written - they're rewritten. Including your own. It is one of the hardest things to accept, especially after the seventh rewrite hasn't quite done it.

— Michael Crichton

Announcements

- No lectures next Monday (29th Oct) and Tuesday (30th Oct)
- you should spend that time working on your presentations
- we resume on Thursday (1st Nov at 10am)
- some feedback on your topic should be now visible in VITAL (no news is good news)
- 2nd Nov (Friday) at 6pm: the deadline for submitting your presentation and preliminary bibliography for your essay
- 10th Dec (Monday) at 6pm: the deadline for submitting your essay