~~Steps~~ Writing a scientific report

- Not a set of problems
- A unified ~~[illegible]~~, standalone document — don't assume reader has read the project description

- Abstract, introduction, method/theory, results, discussion, conclusion, appendices, References

- Tidy layout

- Figures + captions
- Tables + captions
- Algorithms

- ~~Numbered references~~ ✗

- References
  - Recommend numbered
  - Should appear in order [1], ... [2-4], ... [10].
  - ~~Never~~ All references should be mentioned in the text.
    (But OK to say: "This section is based on the present. in Ref. [4]")
  - Proper style: e.g. just a link is not sufficient ⇐
  - Don't cite Wikipedia! (But use it as a starting point!)

- Language:
  - Check spelling
  - Check grammar (singular / plural, ...)
  - Make sure to write complete sentences! (subject, object, verb)
  - Try to avoid too much repition
  - ⇐ To make your text more readable, try to avoid too many passive form. "y was ~~done~~performed" → "We did x".

A sentence "See github repo." is not complete.

Abstract (show example on arxiv).

- Short summary
- Mention main results (with key numbers), not just list what you have done

Introduction

- Set the stage — make the reader a bit interested
- Mention why your work is "important" ("I want a good grade" is not relevant motivation)
- Example: - If we have solved a part. type of equ., mention why this is important (where does this eq. show up)
  - If we've studied optimization of some algo, explain why that is important.

[Why should I read this rather than something else (or Netflix) — but don't overdo it!]

- Present problem here?
- Common to end intro. by outlining the rest of the report.

× End of lecture

Method / Algorithms / Theory

or here?

- Do the formalism
- Explain, derive algorithms
- Define the notation you're using (be consistent!)
- Any special strategy? Mention it here

- Typically don't present any results here

Results or Results (and discussion)

- One approach: Present all results (figures, ~~tbs~~ tables, ...) but don't do much discussion. Just point out how you obt. and what they show. Then, in the Discussion section, discuss the various results.

- Other approach: ~~Res~~ Joint results + discussion. Present and discuss each result as you get to it

- Pay attention to figures, fig. captions, ~~tables~~ sizes, axis labels, colours, notation, tables, ...

- Note: Always refer to all tables/figures from the main text. If you don't refer to it, it shouldn't be there!

Discussion

- ~~Are the results~~
- What do the results mean?
- Are they as expected? (~~given~~ connect to ~~to~~ the theory/method section)
- Key numbers, trends,
- You choose what to highlight (but make sure you cover everything we req.)
- Future directions / improvements?

Conclusion

- Summarize again!
- State key results w/numbers
- (Don't copy sentences)

References

- Go back to general points (grammar etc.)