CS187 - Science Gateway Seminar for CS and Math

Fall 2013

Oct. 10, 2013

Giving a Good Presentation

- You will give lots and lots of presentations!
- At work, school, conferences, job interviews...
- No point doing work if others don't know about it
- You should be able to communicate your ideas and your work effectively

Types of Talks

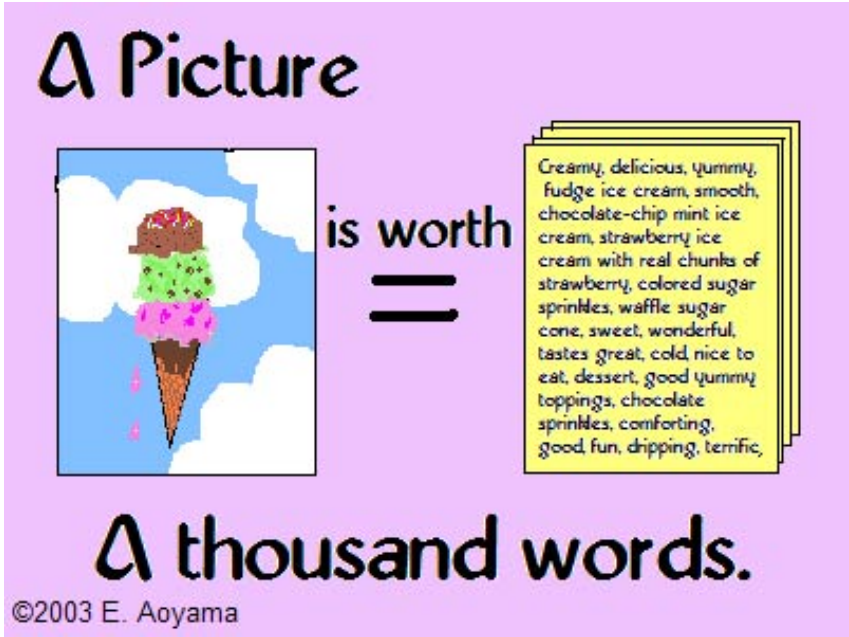
- Short "this is what I do" talk (5 minutes)
- Scientific conference talk (15-30 minutes)
- Project presentation to class (10-20 minutes)
- Seminar talk (approx. 50 minutes)
- Job talk (approx. 50 minutes)
- Talk to team/research group about your work (mostly informal)
- ...

Dos and Don'ts – Style

- Don't use small fonts! Rule of thumb – at least 24pt.
- Smaller fonts should be used only for citations or figure captions.
- In any case don't put too much text in one slide.
- Use sans serif fonts (like Arial or Calibri). Serif fonts (like Times new roman) don't look good on screen.
- Use them for printed material such as articles or posters.

Dos and Don'ts – Style

- Use graphics! Lots of it!
- Use nice, high-res graphics.
- Acknowledge your source and notice that images may be copyrighted.



http://oels.byu.edu

Dos and Don'ts – Style

- Keep your layout nice and clean
- Don't use busy color schemes or fancy fonts
- Use animation in moderation (if at all...)
- Keep it black on white.
- **avoid yellow**

Dos and Don'ts – Style

- Check your slides carefully for spelling errors and typos
- A spell checker is fine but not enough (then vs. than, its vs. it's etc.)
- Be extra careful with potentially garbled equations
- Label axes, define variables and abbreviations (unless obvious)

Typical 15-minutes Presentation Contents

What you'll say, what you say, what you said. Approximately 12-15 slides (average 1-2 minutes/slide).

- **Title** - the title of the topic, the name of the presenter(s) (1 slide, few seconds).
- **Definition, motivation** – The question you explore, why this is interesting (2 slides, 2 minutes).
- **Background** – Sources identified and utilized to provide information and insight (1-2 slides, 1-2 minutes).
- **Methods** – Algorithms, formulas and other sources used to produce the work (1-2 slides, 3 minutes).
- **Restuls and Discussion** – Your findings and conclusions regarding the question (4-5 slides, 6-7 minutes)
- **Conclusions** – A brief summary of your talk, future directions to explore (1-2 slide, 2 minutes).
- Backup slides if expected questions come up (optional).

Title Slide

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Oct. 10, 2013

Topic Definition and Motivation

- What most people take out of the talk...
- Everyone in the audience should understand this part
- What, why, how
- **Start by defining the problem you are presenting today**
- The item above is probably the most important thing about giving a talk, but often ignored
- Why is it an interesting problem
- How the work you present deals with the problem

Background

- Every work builds on existing foundations
- Whether it is your work or others', display existing and previous work
- Acknowledge/cite the sources (including figures, unless you created them yourself)
- You have no time, so stick to the important stuff

Methods

- Algorithms, computational methods, experimental design
- Explain, but do not put too many details here (common mistake!) unless a highly specialized talk.
- In a seminar or job talk – specialists should follow
- Define variables before use, make sure variable names are consistent and formulas are correct.
- You can show pseudo-code or flowchart, try to avoid actual code...

Results and Discussion

- Graphs, plots, tables
- Some discussion of their importance
- Make sure graphs and tables are readable
- Axes should be labeled.
- Avoid yellow, avoid red+green (color blindness is quite common among male population!).
- Stick to the important findings.

Conclusions and Future Directions

- A brief summary of what you talked about.
- What did we learn here? 2-3 points are enough.
- How can this work be extended?
- What still remains unsolved?
- In the end – thank the audience and solicit questions.

Most Important Rules

- **Know your audience!!!**, plan the talk accordingly (if you're not sure, it's ok to ask the hosts)
- Know your topic! (don't put anything on the slides that you don't know or can't explain).
- Avoid jargon (unless a specialized talk) and define non-obvious terms before using them – including, and espcially, non-standard acronyms.
- Eye contact and confidence can help a lot (it DOES get better with time)
- **Practice practice practice!** To yourself and to people in and outside the field.
- Time your talk and make sure you don't exceed your time (another common mistake).
- Know what you want to say in every slide (did I say practice?).

Accidents Happen...

- Have multiple copies of your talk – flash drive, e-mail, your laptop and **a printout**.
- Before your talk – make sure presentation runs smoothly on the computer you'll display on (it's ok to ask ahead what computer it's going to be)
- Especially important if you have video, animation or a different OS
- (my advice – use PDF slides, avoid in-presentation videos)
- Printouts and offline copies are important in case of emergency (power outage, computer breakdown, war etc.)

Writing an Essay

A scientific paper is built in a similar way:

- Abstract
- Introduction
- Methods
- Results + discussion
- Conclusions and future work

Writing an Essay – Contents

An 3-page essay is not as rigid

- Title and name of student
- Abstract/Short Introduction – What is the problem you researched (first sentence!!), why is it interesting and important? (1/2 a page).
- Methods – summary of the algorithms/scientific methods/ mathematical concepts (1 page).
- Summary of results/findings and discussion from your point of view. (1 page)
- Conclusions What was the essay about, what are your findings and conclusions, possible future directions for exploration (1/2 a page).

Writing an Essay – Format

- 11 points, single-spaced, 1-inch top/bottom/left/right margin
- Use Word, LaTeX, Open/Libre/Mac office... NOT handwritten, please.
- Use serif fonts (Times new roman etc.). They look better in print.
- Check spelling, contents, and please ask for help if you need it.