
University of Pittsburgh
Giving a Presentation
How to give a good presentation
How to give a good peer review feedback
School of Computing and Information
Department of Computer Science
1

Presentation Logistics

- We'll have a midterm presentation session.

- All talks must be emailed to me by Thursday midnight the day before your presentation
  - Preferred format: PDF
  - Alternative format: Powerpoint
    - Send these ASAP. We Powerpoint handles OSes terribly
  - Please put a cover page with title, name, and project
    (So that everyone knows who you are and where you worked)
  - Please number your slides!

On the day of your presentation …

- Presentations
  - 5 minutes each group OR 10 minutes?
  - I *will* cut you off if you go over
  - I will hold up a sign at 1/2 minutes left
- Please DO NOT be late to class!
- Every group member should present something
  - This requires planning and organizing
- Slides will be stored in order on my computer
  - At end of talk, please close your slides and open next slides

Peer Review Logistics

- Ask questions!
  - Pay attention and do it!
- Please use the review form on course website
  - More on this closer to the date
- I'm looking into how to submit these anonymously
  - And easily

Peer Review What *Not* To Do

- Don't be lax but also don't be harsh
- Don't judge presenter on the work done
  - Judge presenter on how the work was presented
- A peer review is not about …
  - Humiliating your peer
  - Demonstrating your vast sea of knowledge
  - Complaining about how much time was wasted listening
  - Using wording that triggers an emotional response

Peer Review What To Do

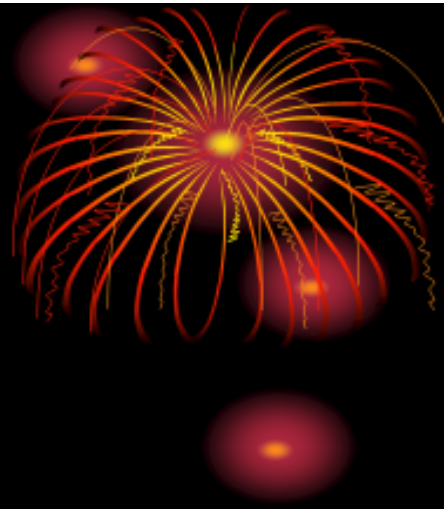
- Take care to write summary of talk
  - Shows your peer that you actually paid attention
- Support your overall merit score with data
  - Your subcategory scores should support your overall score
  - Your comments should give further justification
- Be constructive
  - Positive comments are just as valuable as negative ones
  - Remember, the goal is to help your peer

Now let's talk about giving a good talk

But first, some slide design fails

Admire my beautiful slide

OUTLINE



- Introduction
- Experimental
- Results
- Discussion
- Conclusions
- Future Work

Admire my beautiful slide

- A slide is not a work of art – curb your enthusiasm
- Fonts, colors, and style should be consistent
  - If not, the difference should convey a meaning
- Also remember, a portion of population is color blind
- By the way, was that outline slide *really* necessary?
  - Most talks are structured that way – no information content

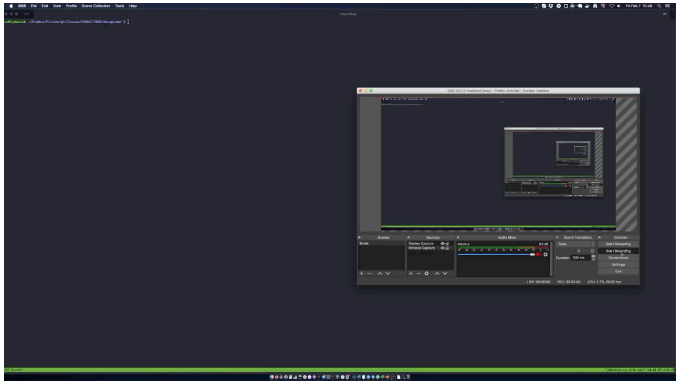
Look at all the unused space

- Look at how much space you have unused on the top
- Now look at me

- Now look at how much space you have unused below
- Now I don't have space for another meme :'(

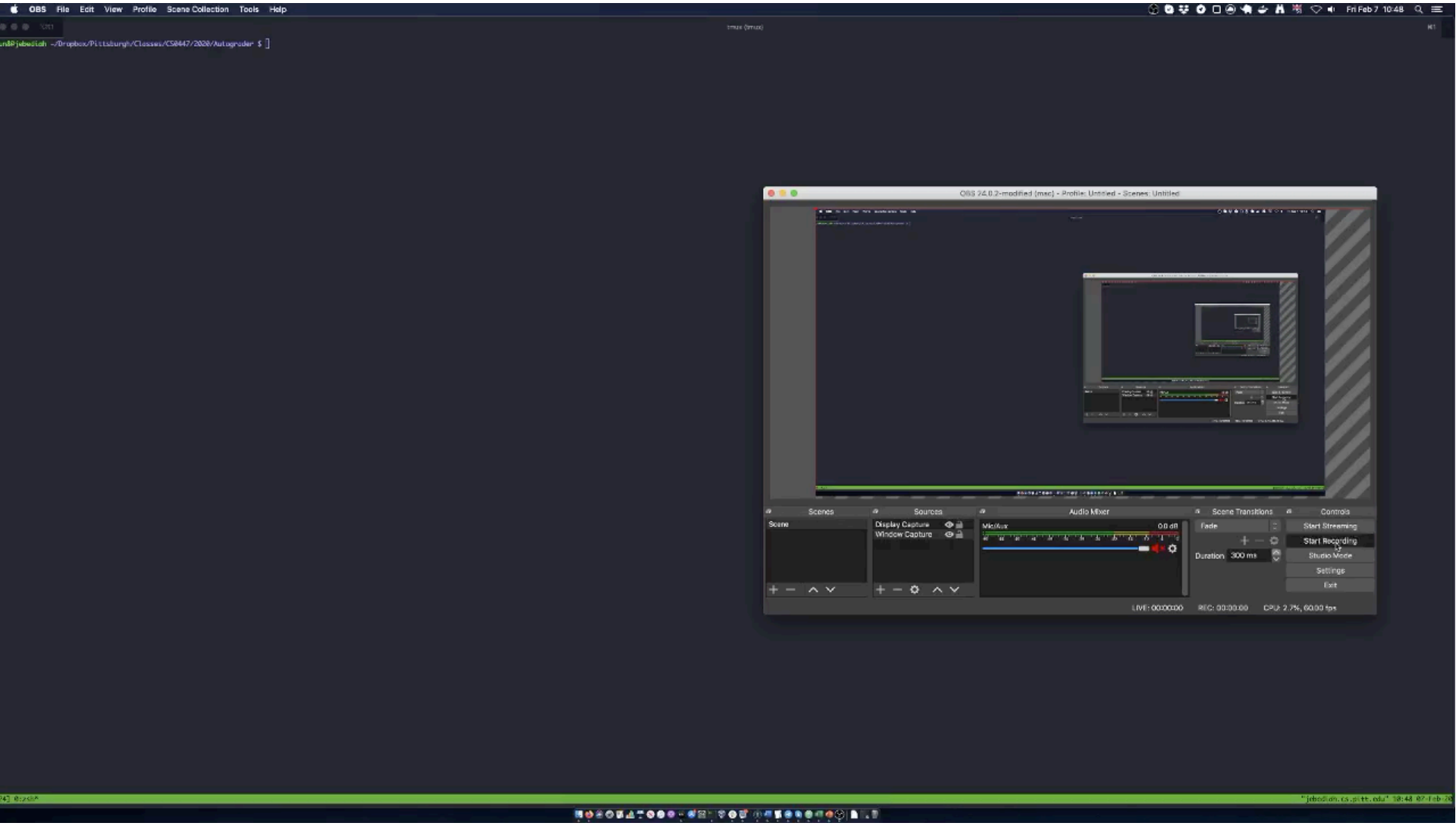
Video

- Look at it! Can’t you see it?



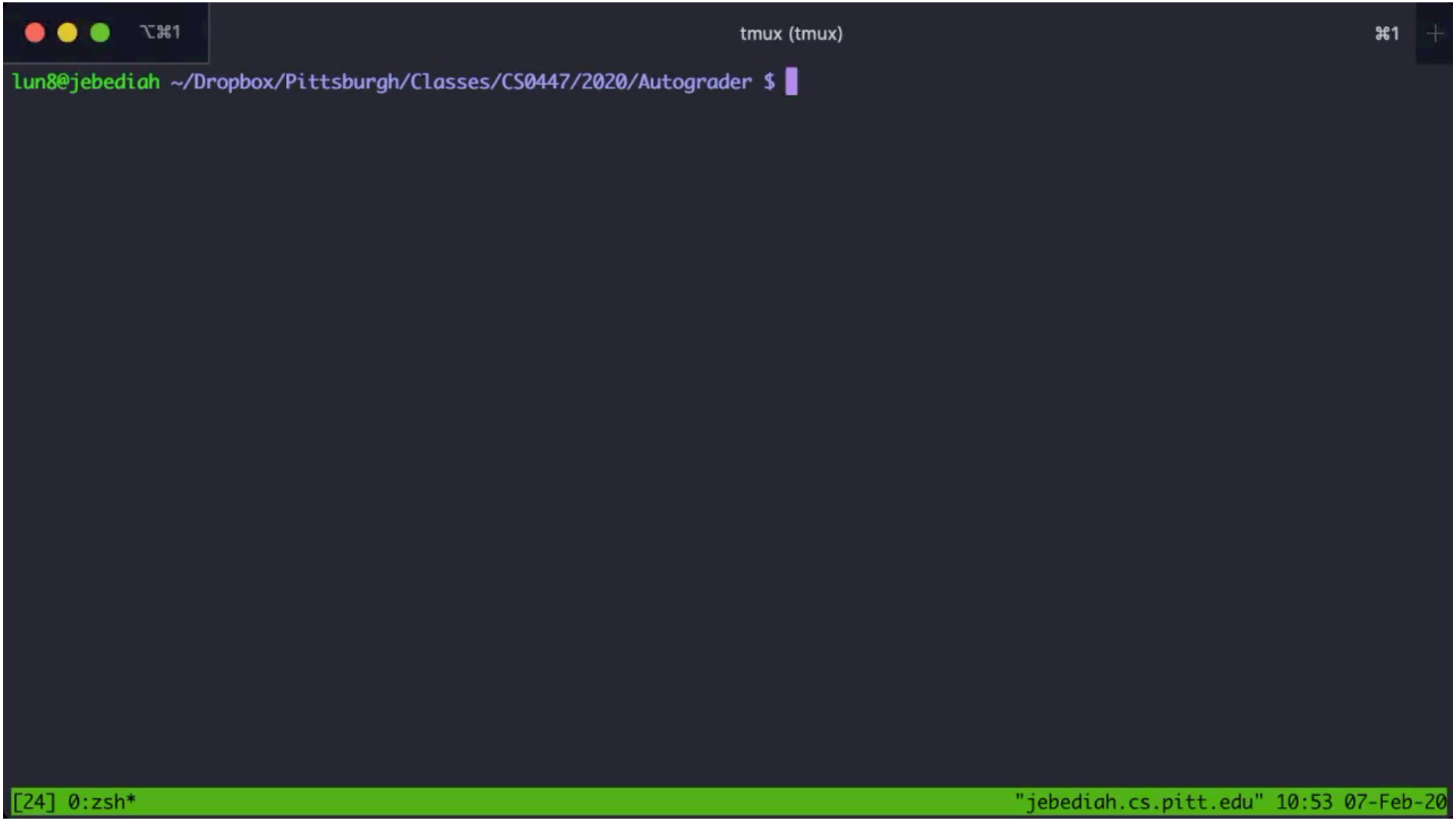
- Maybe larger?

Video


OBS File Edit View Profile Scene Collection Tools Help
Fri Feb 7 10:48
Scenes
Sources
Audio Mixer
Scene Transitions
Controls
Scene
Display Capture
Window Capture
Mic/Aux
Fade
Duration
300 ms
Start Streaming
Start Recording
Studio Mode
Settings
Exit

Video

- Maybe focus on what matters ☺



Look at my code, my code is amazing

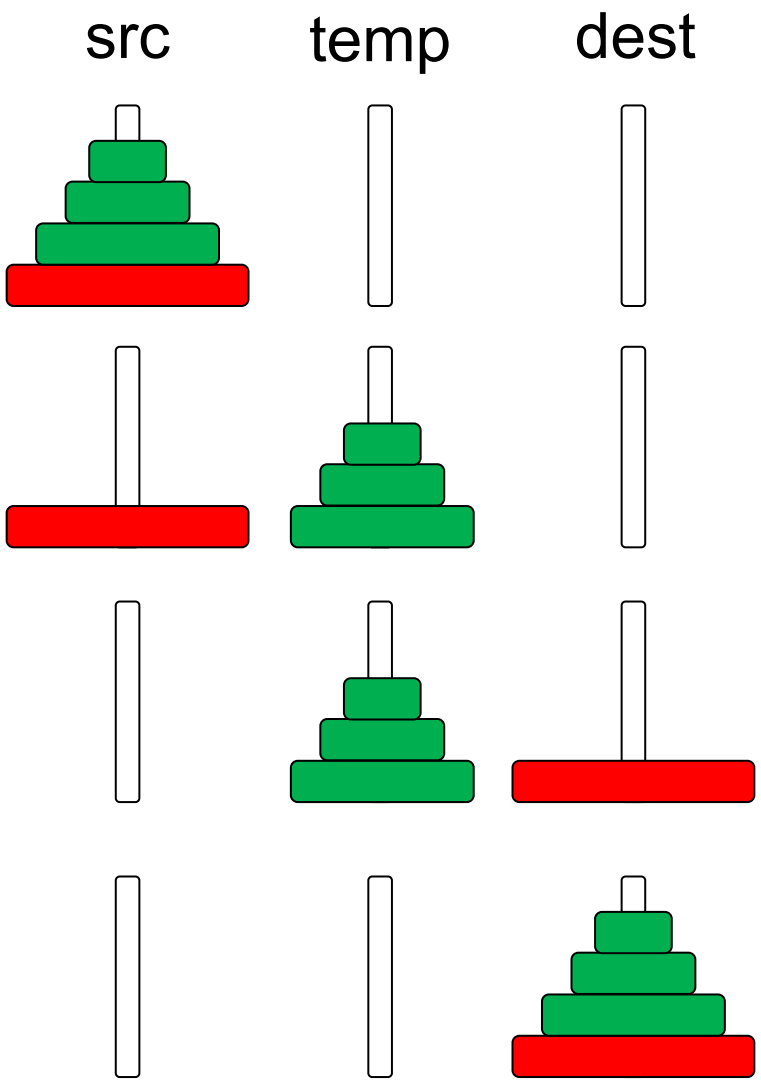
Algorithm 1 A simple recursive scoring scheme.

1: **Function** score($p \in \mathcal{P}, A.R \in \mathcal{R}, v \subseteq \mathcal{V}$) : $\mathbb{R}$
2: // Filter credentials and initialize storage vector
3: $C = \{c_i \mid c_i \in v.C \wedge \mathsf{head}(c) = A.R\}$
4: Discard all $c_i \in C$ of the form $A.R \leftarrow P', P' \neq P$
5: $\overline{s} = [1, 0, \ldots, 0]$ // vector in $\mathbb{R}^{|C|+1}$
6:
7: **for all** $c_i \in C$ **do**
8: $\quad \overline{w_i} = v.\mathcal{A}.\mathsf{weight}(c_i)$ // weight vector for c_i
9: $\quad$ **if** $c_i = A.R \leftarrow P$ **then**
10: $\quad\quad \overline{t} = [1, 1]$
11: $\quad$ **else if** $\mathsf{body}(c_i) = B_1.R_1 \cap \cdots \cap B_k.R_k$ **then**
12: $\quad\quad \overline{t} = [1, B_1.\mathsf{score}(p, B_1.R_1), \ldots, B_k.\mathsf{score}(p, B_k.R_k)]$
13: $\quad$ **else if** $\mathsf{body}(c_i) = A.R_1.R_2$ **then**
14: $\quad\quad$ Find $B \subseteq A.R_1$ such that $\forall B_j \in B : P \in B_j.R_2$
15: $\quad\quad \overline{t} = [1, max_{B_j \in B}(B_j.\mathsf{score}(p, B.R_2))]$
16: $\quad$ **if** $\overline{t}$ contains any 0 entries **then**
17: $\quad\quad \overline{s}[i] = 0$
18: $\quad$ **else**
19: $\quad\quad \overline{s}[i] = \overline{t} \cdot \overline{w_i}$
20:
21: // Get master weight vector and combine all weights
22: $\overline{w} = v.\mathcal{A}.\mathsf{weight}(A.R)$
23: **return** $\overline{s} \cdot \overline{w}$

Look at my code, my code is amazing

- Hate to break it to you but …
- Nobody wants to read your code (if avoidable)
  - Nobody wants to read your code (if not avoidable)
    - ➢ Nobody wants to read your code (period ;)
- If you really feel the need …
  - At least explain at a high level what the code is trying to do
  - Focus audience attention at the part that is interesting

Towers of Hanoi



- Move all disks from a tower to another. You can use a third temporarily.
- Move n-1 disks into “temp”
- Move 1 disk into “dest”
- Move n-1 disks into “dest”

By the power of recursion!!!

- Recursive solution for the Hanoi towers

```
Void solve_hanoi(n, src -> dest, temp)
{
      if (n == 0) return;
      solve_hanoi(n-1, src -> temp, dest);
      move(from, to);
      solve_hanoi(n-1, temp -> dest, src);
}
```

Solve moving 0 disks!

Moving one disk is easy

Solve moving n-1 disks with the power of recursion!

I am a math whiz

$$\text{score}(p, A.R, v) = \sum_{(C_i, w_i) \in \text{osets}_\omega(v.C, A.R)} w_i \cdot \frac{1}{2}^i$$

$$\omega_{len}(C_s, \_) = \gamma^{\max_{p \in \text{paths}(C_s)}(\text{length}(p))}$$

$$\omega_{ind}(C_s, C) = 1 - \frac{\max_{C_i \in C \setminus \{C_s\}}(|C_s \cap C_i|)}{|C_s|}$$

$$\omega_{li}(C_s, C) = \alpha \cdot \omega_{len}(C_s, \_) + \beta \cdot \omega_{ind}(C_s, C)$$

I am a math whiz

- Well guess what. Many are not.
- Translate math to plain English whenever you can
- At least highlight what matters, and what is the take home message

$$\omega_{ind}(C_s, C) = 1 - \frac{\max_{C_i \in C \setminus \{C_s\}}(|C_s \cap C_i|)}{|C_s|}$$

Increasing the elements of $\overline{C_s}$ decreases the value of the function

Just read my text

- Proof sketch:

Monotonic. To prove the monotonicity of Equation 6, we proceed by induction. We first assume that principal p has previously discovered the (ordered) collection of proofs and weights $(C_1, w_1), \ldots, (C_n, w_n)$ for the role $A.R$. The base case that we must consider is that a new pair (C_s, w_s) is discovered such that no weight w_i is less than w_s. In this case, this new pair will introduce a new term to the end of the summation calculated by Equation 6, thereby increasing principal p's score for the role $A.R$.

Assume that (C_s, w_s) can be inserted before up to n terms in the sequence of (c_i, w_i) pairs while still preserving the monotonicity requirement. Now, assume that p has previously found proofs of authorization with the sequence of weights $S = (C_1, w_1), \ldots, (C_i, w_i), \ldots, (C_{i+n}, w_{i+n})$ and has now discovered a (C_s, w_s) pair such that $w_s > w_i$, thereby needing to be inserted before $n + 1$ terms in the sequence S. We first note that replacing (C_i, w_i) with (C_s, w) will generate a sequence S' that—when used in conjunction with Equation 6—will produce a score greater than that produced using S, since $w_s > w_i$ and all other terms are the same. By the inductive hypothesis, (C_i, w_i) can then be re-inserted before the n final terms of S' while still preserving monotonicity.

Just read my text

- Then why am I listening to you?
- Having too much to read can interfere with listening
  - Did you know?
    Reading and listening exercise same part of brain

Content and delivery are just as (perhaps more) important

Issues with Content and Delivery

- Issues with content:
  - Why should we care about the problem?
  - How will the results be useful in practice?
  - Had no idea where talk was going!
  - Missing context to understand problem setup

- Issues with delivery:
  - Lack of eye contact
  - Lecturing to the board/laptop, not the audience
  - Speaks too quickly / too slowly
  - Overruns allotted time

Structure your talk based on your audience and the time that you have

Your audience: Generally smart individuals

- Computer Scientists? Yes
- Knowledgeable about your area? Maybe
- Knowledgeable about your problem? Probably not

Time is usually limited

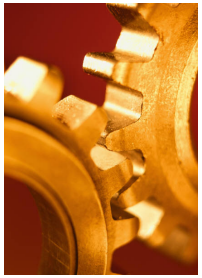
- Invited talk: < 1 hour
- Conference talk: 20 minutes or so
- Elevator talk: < 2 minutes
- Your talk: 5-10 minutes

This is not a lot of time…

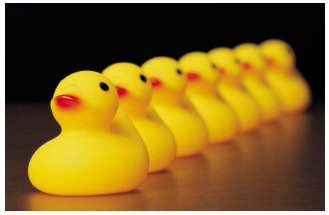
Bottom line: Your audience should learn something from your talk

That's not a lot of time, how should I structure my talk to relate to these people?

This is a hard problem…



… with interesting applications…



… that builds on prior work…

Two sub-parts:

- You solved a problem
- You used neat technological advancements to do this

Hint: Try to give audience one good take-home point

It's not just *what* you say, but *how* you say it

Body language says a lot

- Make eye contact with your audience
  - *Corollary*: Face your audience
- Some movement is good
- Don't speak too fast (or too slow!)

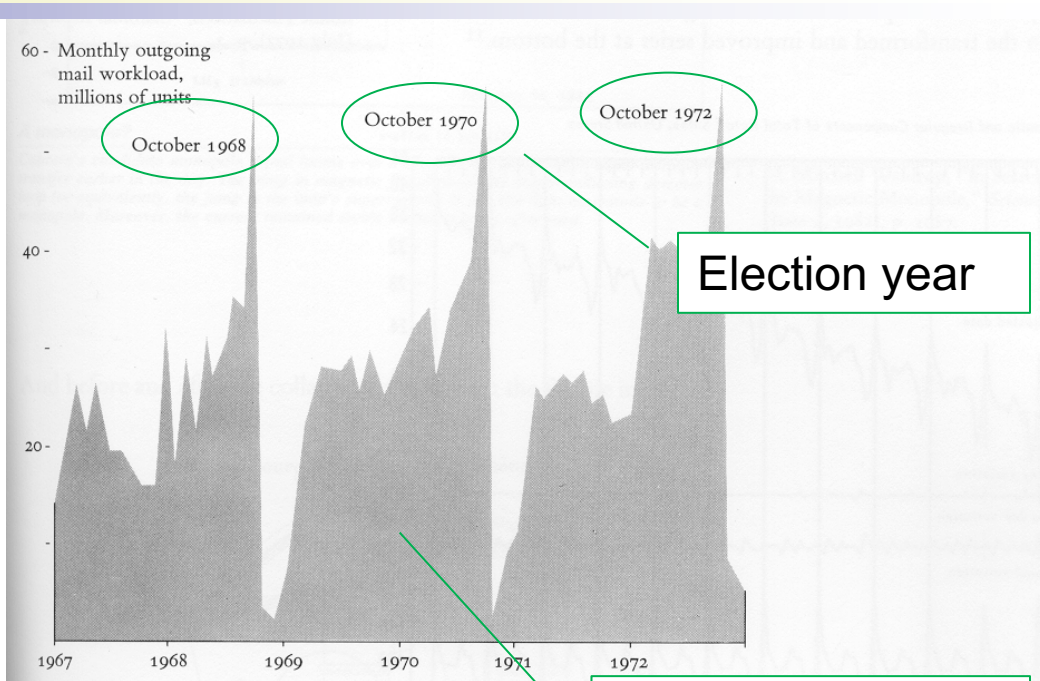
Make useful slides

- One primary idea per slide
- Use slide titles to convey take-away message
- Do not read your slides!
  - But put all important information there!
- A picture is worth a thousand words…

A picture is worth a thousand words

- Edward R. Tufte, *The Visual Display of Quantitative Information.* Graphics Press (2001)

- Graphic shows fluctuating mail workload in sync with the timing of political elections



The graphic is worth at least 700 words, the number us
news report describing how incumbent representatives
free mailing privileges to advance their re-election campaigns:

FRANKED MAIL TIE TO VOTING SHOWN

Testimony Finds the Volume Rises Before Elections

WASHINGTON, June 1 (AP) —New court testimony and documents show that much of the mail Congress sends at taxpayer expense is tied directly to the re-election campaigns of Senate and House members. According to material filed in a lawsuit in Federal Court:

¶Senate Republicans put two direct-mail experts on the public payroll to advise them on how to use their free mailing privileges to get votes.

¶An election manual prepared for Senate Democrats refers to newsletters as a "free forum," and sets up a timetable for sending them as an integral part of a model re-election campaign.

¶Senator John G. Tower, Republican of Texas, mailed more than 800,000 special-interest letters at taxpayer expense as part of his 1972 re-election effort and received campaign volunteer offers and donations in response.

¶Senator Jacob K. Javits, Republican of New York, gave written approval in 1973 for a tax-paid mail program intended to better his image and pay off at the polls. He focused his mail on areas where he needed votes.

¶The volume of "official" Congressional mail rises in election years and peaks just before the general election.

None of this activity necessarily violates any law or regulation, since Congress has wide discretion in the use of tax-paid mail. Congress gave itself the right to send official mail at Government expense at the founding of the republic, and only Congress polices against abuses of the free mailings.

Complaints of political use of the free-mailing privilege, called the franking privilege, are heard every election year. Recently, however, the volume and cost of franked mail has multiplied. A new Federal law will limit what out-of-office challengers can spend to unseat incumbents.

In 1972, Congress passed a law prohibiting mass franked mailings within 28 days before an election. The sponsor of that legislation, Representative Morris K. Udall, Democrat of Arizona, said in an interview that further changes were needed to curtail political abuse of the frank.

Mr. Udall urged a 60-day pre-election cutoff for mass mailings and said he favored closing a loophole that recently allowed defeated Representative Frank M. Clark, Democrat of Pennsylvania, to send a franked newsletter to his old constituents after he had left office. Mr. Clark is seeking to regain his old post.

Practice Documented

Seldom has the political use of franked mail been so well documented as in recent testimony and documents filed in a Federal Court by Common Cause, the lobby group, which is suing for an end to tax-financed mass mailings by Congress.

For example, Joyce P. Baker, a political mail specialist, said in a 1973 job proposal that she wanted to set up direct-mail programs for Republican Senators using franked mail.

"The purpose of such a program is to help an incumbent Senator get re-elected," she said.

She was put on the Senate payroll at $18,810 a year in 1973 and 1974 and testified that during that time she aided Republican Senators Robert J. Dole of Kansas, Peter H. Dominick of Colorado, Charles McC. Mathias Jr. of Maryland

Another political mail specialist, Lee W. MacGregor, wrote a proposal for the use of franked mail by his chief, Senator Javits, in 1973.

"The over-all objective of the franked mail program can be to get the recipient of the mail to identify positively with a particular stand you have taken or a bill you have introduced; the kind of identification that can be translated into a vote at the polls on election day," Mr. MacGregor said.

Mr. Javits was out of the country and could not be reached. His administrative assistant, Donald Kellerman, defended the use of franked mail.

"It is a standard device to let voters, not voters but citizens, know what the Senator is doing here in Washington," he said.

Senator Tower's use of franked mail in his 1972 campaign was documented by memorandums.

Tom Loeffler, a high-ranking campaign aide, wrote in a memorandum dated Oct. 27, 1972, that during the campaign Senator Tower had sent "51 special interest letters totaling approximately 803,333 franked mailings."

Mr. Tower was not available for comment. His administrative assistant, Elwin Skiles, said the Senator's use of franked mail in 1972 was within the law, and he defended the free-mailing privileges.

Postal Service figures show that in the 12 months before November, 1973, Congress sent 222.9 million franked pieces of mail. But in the next 12 months, covering the election season of 1974, Congress sent 350.6 million, a jump of 57 per cent about what's happening," Mr. Skiles said.

Practice, Practice, Practice

- Practice makes better
  - *Alone*: Work on your "script," smooth out transitions
  - *Peer group*: Get used to other people being around
  - *Broader population*: Assess outsider comprehensibility
- "Flash" is good, but too much flash is distracting
  - *Good*: Animations to progressively build diagrams
  - *Bad*: Animating every slide transition, every line
- Make sure you refer to every item on a slide
  - If you don't, it is always better to remove that item