



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





Presentation Logistics

- **Next 11 weeks:** CS 1900 internship presentations
- **Final week:** CS 1950 research presentations
- Check schedule on website that your name is there!
- **All talks** must be emailed to me by **Thursday midnight** the day before your presentation
 - Preferred format: PDF
 - Alternative format: Powerpoint, Keynote
 - Please number your slides!



On the day of your presentation ...

- Max 9 students per day / 5 minutes for each student
 - I *will* cut you off if you go over 5 minutes
 - I will hold up a sign when you only have 1 minute remaining
- Please DO NOT be late to class!
 - Presenters please come 5 minutes early to set up
- Designated front row for presenters
 - Presenters will sit in the order of their presentations
- Slides will be stored in order on in-class computer
 - At end of talk, please close your slides and open next slides



Peer Review Logistics

- Please use the review form on course website
- Email review to our TA by end of day of talk
 - TA will collect 5 peer reviews + my review and forward
- Review assignment table to be posted this weekend
 - Assignments done using a Reviewer ID for anonymity
 - Each row has ID followed by 5 people you need to review
If row is: "23" "John" "Jane" "Ben" "Mary" "Alex",
reviewer 23 is expected to review these 5 people
 - Your reviewer ID will be emailed to you individually



Peer Review What *Not* To Do

- Don't be lax but also don't be harsh
 - I expect the majority of students to get 4 out of 5
- 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



Read my code

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

- Hate to break it to you but ...
- Nobody wants to read your code (if avoidable)
- 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



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



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 $(C_1, w_1), \dots, (C_n, w_n)$ 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 $S = (C_1, w_1), \dots, (C_i, w_i), \dots, (C_{i+n}, w_{i+n})$ 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 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...



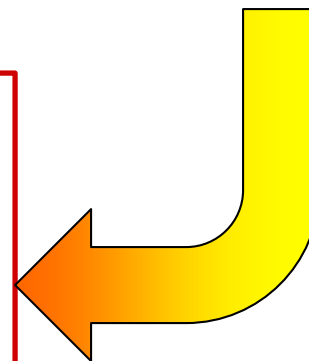
... with **interesting** applications...



... 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!
- A picture is worth a thousand words...

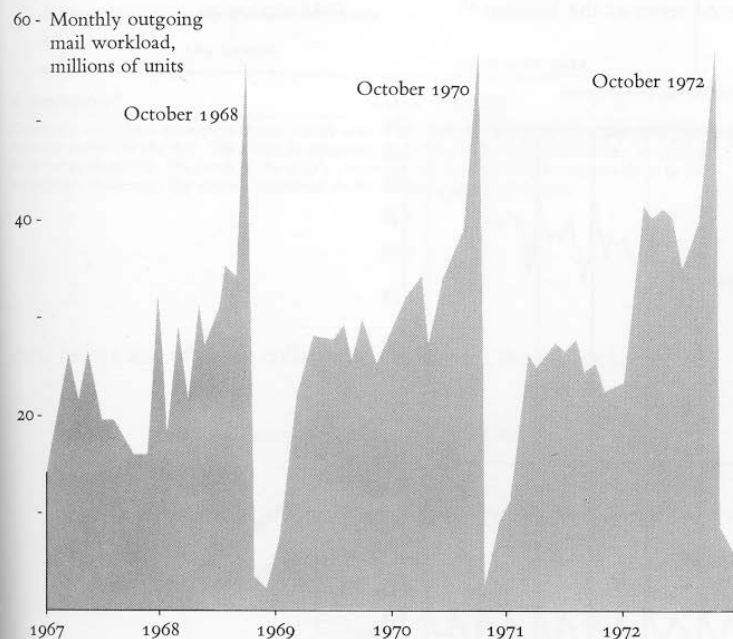




A picture is worth a thousand words

■ 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 used in a news report describing how incumbent representatives exploit their 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 the 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.

Doile 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," Mr. MacGregor said. Mr. Javits was out of the country and could not be reached. His administrative assistant, Donald Kellerman, 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.

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 "31 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 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

It takes
three weeks
to prepare a
good ad-lib
speech

