CSC290 Communication Skills for Computer Scientists

Tutorial 2

September 17/20, 2019

How to Read a Paper

Agenda

- Review: How to read a paper
- First-pass read of one of two papers
- Debrief in small groups
- Choose a paper for your critical review
- Second-pass read of the chosen paper

Why Read Papers?

- Peer-reviewed publications is a source of high quality information
  - **peer review** means that other researchers have read and accepted the work for publication
- "A month in the laboratory can often save an hour in the library." – Frank Westheimer
- Reading (well-written *and* poorly written) technical documents helps you become a stronger writer

How to read a paper (modified)

First pass: understand the general idea of a paper

- Carefully read the title, abstract, and introduction
- Read the section and sub-section headings
- (Optional) Read the first sentence of each paragraph
- (Optional) Look at the figures
- (Optional) Look at the types of data presented in tables
- Read the conclusions

Second pass:

- Read the full paper again, jotting down notes about:
  - terms you don't understand
  - questions that you have for the author

Two Papers

1. **Is It Worth Responding to Reviews? Studying the Top Free Apps in Google Play**: https://ieeexplore-ieee-org.myaccess.library.utoronto.ca/abstract/document/7325189
2. **How Do Students Talk About Intelligence?: An Investigation of Motivation, Self-efficacy, and Mindsets in Computer Science**: https://dl-acm-org.myaccess.library.utoronto.ca/citation.cfm?id=3291279.3339413

Assign each table one of the two papers to read (first pass).

First Pass

- Carefully read the title, abstract, and introduction
- Read the section and sub-section headings
- (Optional) Read the first sentence of each paragraph
- (Optional) Look at the figures
- (Optional) Look at the types of data presented in tables
- Read the conclusions

Answer the questions in the worksheet.

Table Merge/Swap

- Send **half** of your team members to another table assigned to the other paper
- [3 min] Students who read **Paper 1** describe the paper to the table
- [3 min] Students who read **Paper 2** describe the paper to the table

Vote

Which paper are you more interested in reading?

1. **Is It Worth Responding to Reviews? Studying the Top Free Apps in Google Play**
2. **How Do Students Talk About Intelligence?: An Investigation of Motivation, Self-efficacy, and Mindsets in Computer Science**

Second Pass

(Note: If you did not do a first-pass read on this paper, do that first)

Read the full paper. Use the **back of the worksheet** to:

- jot down terms you don't understand
- write questions that you have for the author
- write down anything else that confused you

We'll read silently for 10 minutes.

Discussion

Critical Review

A critical review is an analysis and evaluation of an article. It includes:

- A brief summary, so that a reader can understand your evaluations:
  - What was the purpose of the study?
  - What was the methodology?
  - What did the author conclude?
- An analysis of whether the methodology is sound:
  - What assumptions does the author make?
  - Does the author account for all of the data, or are portions left out?
  - Are there logical flaws in the argument?
  - How can the author improve upon the study?

See `https://utsc.utoronto.ca/twc/sites/utsc.utoronto.ca.tw`

We'll grade a few critical review articles next class