Research Methods
in computer science
Spring 2023

Lecture 18

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Agenda

Conference updates

Reading and tracking papers

HW8

How to Read a Scientific Paper

Begin with introduction, not abstract.
Identify the big question
Summarize the background in five sentences
Identify the specific questions
Identify the approach
Read the methods section
Read the results section
Determine if the results answer the questions
Read the conclusions/discussion/interpretation section
Read the abstract
Find out what others say about the paper

https://www.huffingtonpost.com/jennifer-raff/how-to-read-and-understand-a-scientific-paper_b_5501628.html

How to read a research paper

Goal is to understand the scientific contribution

Read critically
 Question the study, approach, …
Read creatively
 Extrapolate, extend, generalize, …
Make notes
Summarize
Compare

https://www.eecs.harvard.edu/~michaelm/postscripts/ReadPaper.pdf

How to Read a Paper

First pass [5-10 mins]

    High level idea, category, context, contributions

Second pass [1 hr]

    Some results, key ideas of the paper and key evidence

Third pass [variable]

    Attention to deal, re-create the paper

http://ccr.sigcomm.org/online/files/p83-keshavA.pdf

How to Read an Engineering Research Paper

Read to answer questions
1. What are motivations for this work?
2. What is the proposed solution?
3. What is the work's evaluation of the proposed solution?
4. What is your analysis of the identified problem, idea and evaluation?
5. What are the contributions?
6. What are future directions for this research?
7. What questions are you left with?
8. What is your take-away message from this paper?

From "Where" to Read Papers?

Conferences? Which?

Journals? Which?

From where else?

Paper Notes / Tracking

Things worth remembering

Results, Ideas, Authors, ….

Electronic systems [Mendeley?…]

Could be integrated with References

Some groups have shared bib files

Plain text file may be enough

HW9

Write the evaluation results section of your paper.