Identifying and Reading Research Papers

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What is the goal?

- Assigned readings for class, research, etc.
- Surveying the literature of a new field/area
- Keeping current with the field
- Just interested?
Places to find Papers

- Publication venues (conferences, journals, etc.) that are common in the area
- Non-Peer Reviewed (but easy access): arxiv
- Common Search Tools: Google Scholar, CiteSeerX, WorldCat, etc.
- BU Library offers access to many sources that are behind a paywall
Identifying Papers
Search Tips

- Search technical keywords that come up repeatedly
- If just starting out, look for “survey” papers
- Depending on technical background, advanced course notes can be helpful
Checking References

- Which papers are referenced the most?
- Which authors’ names keep coming up?
- Which peer-reviewed venues are papers published?
- What works appear in the “Related Works” sections?
What’s Worth Reading?

- Don’t read everything! Do a first skim before you commit.
- Keep a bibliography of papers you’ve read/skimmed with some short notes about them.
- Talk to people!
Reading Papers
Reading Papers

- Related Work
- Abstract
- Introduction
- Methods
- Experiments
- Conclusion & Future Work
Reading Papers - Related Work

Related Work

1) Familiar with the topics
2) Unfamiliar with the topics
3) Importance to your own research
Reading Papers - Abstract

Abstract (Most Important Part)

1) Definition of the problem

2) Downsides or vacant research areas of the previous approaches

3) Novelty and contributions of this paper
Reading Papers - Introduction

Introduction:

1) Similar with Abstraction

2) More specific details like motivation, contribution, high-level method structures, etc.
Reading Papers - Methods

Methods

1) New mechanism?

2) Mathematical Derivation or Empirical Improvement

3) Generalization
Reading Papers - Experiments

Experiments

1) Experiment Settings
2) Quantitative Results
3) Ablation Study
4) Qualitative Results
Reading Papers - Conclusion & Future Work

Conclusion & Future Work

1) What can I learn from the paper?

2) How to improve the approach?

3) Can the approach be applied on any other research topics?
Sources

http://www2.cs.uregina.ca/~pwlfong/CS499/reading-paper.pdf

https://cs.gmu.edu/~offutt/classes/phd/Hints-Read.html


https://web.stanford.edu/class/ee384m/Handouts/HowtoReadPaper.pdf