



Identifying and Reading Research Papers

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What is the goal?

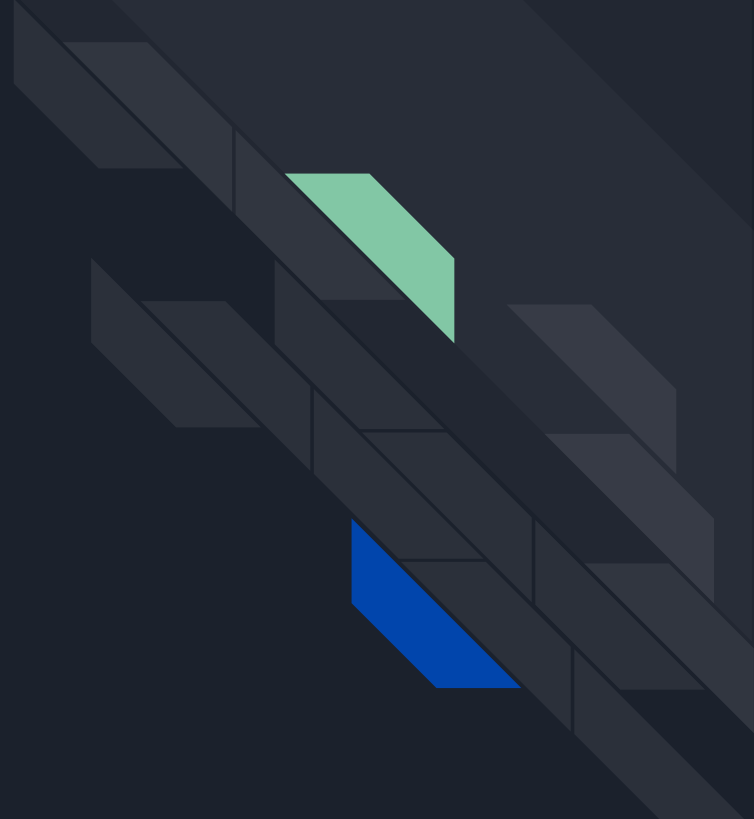
- Assigned readings for class, research, etc.
- Surveying the literature of a new field/area
- Keeping current with the field
- Just interested?



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

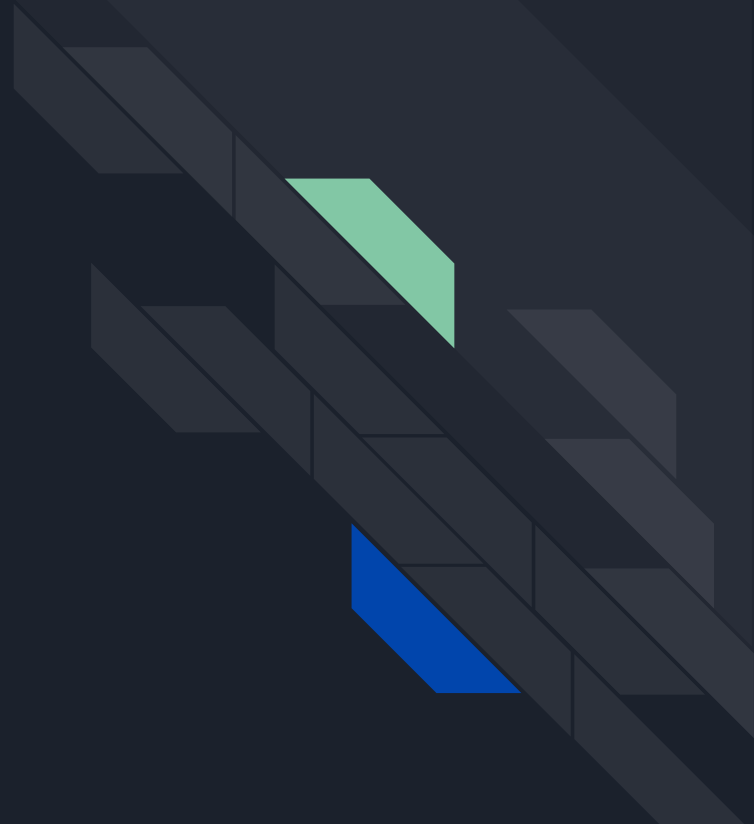
- Which papers are referenced the most?
- Which authors' names keep coming up?
- Which peer-reviewed venues are papers published?
- What works appear in the the “Related Works” sections?



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/~pwlifong/CS499/reading-paper.pdf>

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

<https://people.cs.pitt.edu/~litman/courses/cs2710/papers/howtoreadacspaper.pdf>

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