

# How to Select Research Papers for Course Project

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## A few comments

- ▶ You must select 3 or more *related* papers—they must be related in some way that makes sense.
- ▶ Best to get started early and work incrementally
- ▶ Use already available data and try on small datasets and models first

# One possible process

1. Select high-level area of interest
  - i. Artificial Intelligence – AAI\*, IJCAI
  - ii. Machine Learning – NeurIPS\*, ICML\*, ICLR\*, JMLR
  - iii. Computer Vision – CVPR\*, ICCV, ECCV
  - iv. Natural Language Processing – ACL\*, NAACL, EMNLP
2. Find most cited papers in these conferences via h5-index on Google scholar
3. Open papers that seem interesting to you
4. Read abstracts of these papers to narrow your selection
5. Download full papers and skim

## Two approaches to finding paper titles

- ▶ Google Scholar Metrics (most cited papers)
  - ▶ [https://scholar.google.com/citations?view\\_op=top\\_venues&hl=en](https://scholar.google.com/citations?view_op=top_venues&hl=en)
  - ▶ Click magnifying glass in top right
  - ▶ Search for conference (top right)
  - ▶ Click hyperlink number under “h5-index”
- ▶ Go to venue website (“accepted papers” or “proceedings”)
  - ▶ <http://jmlr.org/papers/>
  - ▶ <https://papers.nips.cc/book/advances-in-neural-information-processing-systems-31-2018>

## Expanding based on one paper

- ▶ (Backward) Read paper and find key references of paper
  - ▶ Most papers based on one or two previous papers
- ▶ (Forward) Find papers that cite this paper
  - ▶ Google scholar again 😊
  - ▶ Example for ICML 2017 paper “Attention is All You Need”:  
[https://scholar.google.com/scholar?hl=en&as\\_sdt=0%2C15&q=Attention+is+All+you+Need&btnG=](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C15&q=Attention+is+All+you+Need&btnG=)

# Concluding thoughts

- ▶ Tutorials at conferences can be great resources for an overview of a topic (many recent ones have videos and slides)
  - ▶ [ICML 2019 Tutorials](#)
  - ▶ [NeurIPS 2019 Tutorials](#)
- ▶ Do not expect to understand after reading once
  - ▶ Most papers will take multiple (if not many) reads to understand (especially when you're new to the field)
  - ▶ Do not be discouraged because it is challenging