How to Select Research Papers for Course Project

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A few comments

- You must submit 3 papers by the due date (September 6) to get credit

- But, I will allow changes to your paper selections after that date

- Best to get started early and work incrementally

- (Use already available data and try on small datasets and models first)
General suggested process

1. Select high-level area of interest
   i. Artificial Intelligence – AAAI, IJCAI
   ii. Machine Learning – JMLR, ICML, NeurIPS, (AISTATS)
   iii. Computer Vision – CVPR, ICCV, ECCV
   iv. Natural Language Processing - ACL, NAACL, EMNLP

2. Read through a list of paper titles
   ▶ Select titles that interest you

3. Read abstracts of these papers
   ▶ Further narrow your selection

4. Download full papers and skim
Two approaches to finding paper titles

- Go to venue website ("accepted papers" or "proceedings")
  - [http://jmlr.org/papers/](http://jmlr.org/papers/)

- 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"
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=
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