CIS-620

Spring 2021

Learning in Few-Labels Settings

Dan Roth

Computer and Information Science

University of Pennsylvania

Meeting # 5

2/22/21

Admin

Questions?

- If you haven't selected a paper to present, please do so.
  - All the papers will be scheduled this week
- Recall that you need to be a discussant on two papers.
  - Please send your questions/bullets by Sunday.
- Please follow the presentation guidelines

- Late policy:
  - 4 Days (96 hours).

- Papers to reproduce where chosen.
  - Reproduce the key results;
  - Invent one additional experiment;
  - Write a short report summarizing your experience.
  - Give a short presentation

Presentations:

- Please read the **guidelines.**
- Do not **cut-and-paste** the paper to the slides.
  - Not everything should be presented.
  - The order of the paper may not be the right order for a presentation.
- When you read the paper:
  - You can **go back and forth** to check things (notation, details, math).
  - You can consult outside resources if needed.
- **Your audience cannot do it.**
  - Your job as the presented is to teach your students the paper despite this limitation.
- Think about what you need to do.
- **Experiments:** Just putting a table on the slide is not useful. Instead, discuss:
  - What is the goal of this experiment.
  - How do the results in the table achieve it (or not)
  - You don't need to show all the results

- So far, I've given very long list of comments to all of you.
- My goal is that you will learn from earlier presentations, so that I will not need to do it…

Today's Papers

- Zero/Few-Shot Learning
  - A Baseline for Few-Shot Image Classification (Xingfan Jia)
- Indirect Supervision
  - Multi-class Classification without Multi-class Labels (Yuchen Zhang)
- Adaptation
  - Understanding Self-Training for Gradual Domain Adaptation (Hongrui Zheng)

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Named Entity Recognition: Adaptation

- Is NER a solved problem?

We can think about Zero/Few Shot as dealing with changes in the Y space. The more commonly studied problem is that of changes in X.

- ☐ Multiple CoNLL SOTA systems
- ☐ Names in the test never appeared in training [Agarwal et al. 2020]

CoNLL'03	Indian	Vietnamese
89.55	75.31	65.82
90.64	78.50	70.53
91.02	81.74	72.04
91.74	82.68	72.58
90.47	82.31	**78.99**
90.55	**83.68**	77.28

- ☐ Multiple CoNLL SOTA systems
- ☐ Tested on other datasets (**same label sets**) [Yu, 2019]

CoNLL	CoNLL Unseen	OntoNotes	Enron
90.94	86.11	77.95	45.11
90.88	84.40	79.79	57.56

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