



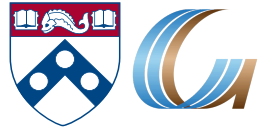
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CIS-620  
Spring 2021

# Learning in Few-Labels Settings

Dan Roth  
Computer and Information Science  
University of Pennsylvania

Meeting # 5  
2/22/21



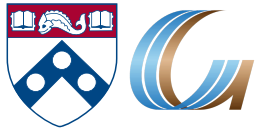
- If you haven't selected a paper to present, please do so.
  - [All the papers will be scheduled this week](#)
- Recall that you need to be a discussant on two papers.
  - [Please send your questions/bullets by Sunday.](#)
- Please follow the presentation guidelines
- Late policy:
  - [4 Days \(96 hours\).](#)
- 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 presenter 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

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- Zero/Few-Shot Learning

-   [A Baseline for Few-Shot Image Classification](#) (Xingfan Jia)

- Indirect Supervision

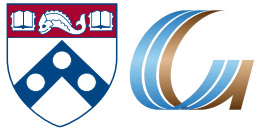
- [Multi-class Classification without Multi-class Labels](#) (Yuchen Zhang)

- Adaptation

- [Understanding Self-Training for Gradual Domain Adaptation](#) (Hongrui Zheng)

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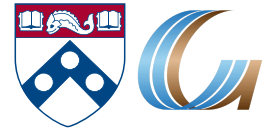
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# Named Entity Recognition: Adaptation



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.

## ■ Is NER a solved problem?

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

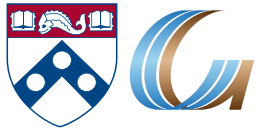
- Multiple CoNLL SOTA systems
- Tested on other datasets (**same label sets**) [Yu, 2019]

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

CoNLL	CoNLL Unseen	OntoNotes	Enron
<b>90.94</b>	86.11	77.95	<b>45.11</b>
90.88	84.40	79.79	57.56

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