

Research Seminar - NLP

Y-Data Deep Learning Course
17.6.22

About Me – Eyal Ben-David

- PhD Candidate @Technion (Roi Reichart's lab)
- Working at Gong as an NLP research (Human conversations)
- Interned at @IBM Research (Dialogue Systems)
- Lecturer of the NLP Course at the Technion (97215)
- Bachelors in Electrical Engineering (Technion)

Goals

Reading scientific papers.

Get to know related works.

Present and understand new concepts presented in a paper.

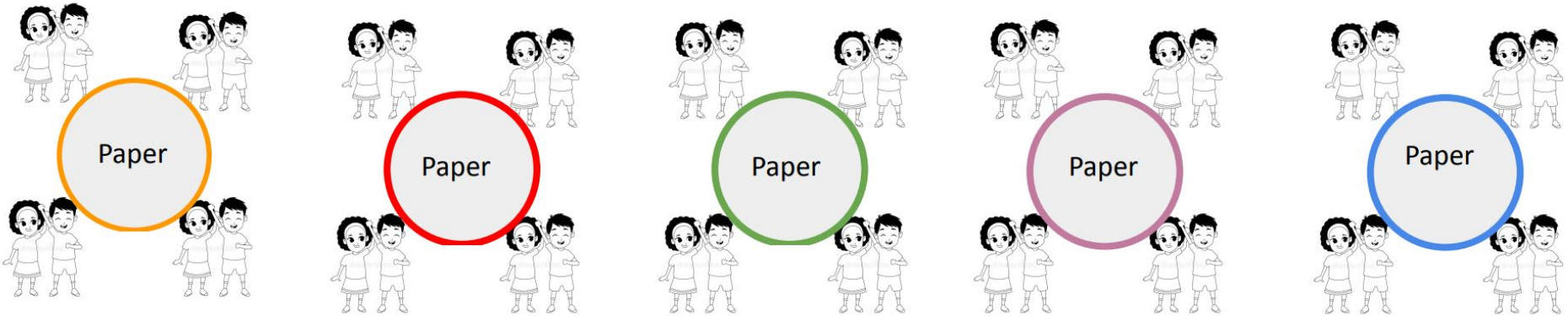
Critically assess the scientific work.



Seminar Sessions

5 groups of 8-10 students.

Each group - 4-5 pairs.



Pairs' Assignments

Each will perform one of the following:

1. Presenting the main idea of the paper (~20 min)
2. Presenting the experimental setup and results (~20 min)
3. Presenting first coding task (~20 min)
4. Presenting second coding task (~20 min)
5. Critical paper presentation (~20 min)

** Send the slides to your mentor (at least) a day before the seminar.

Exploiting Cloze Questions for Few Shot Text Classification and Natural Language Inference

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Proceedings of the 16th Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2021

Pattern Exploiting Training (PET)

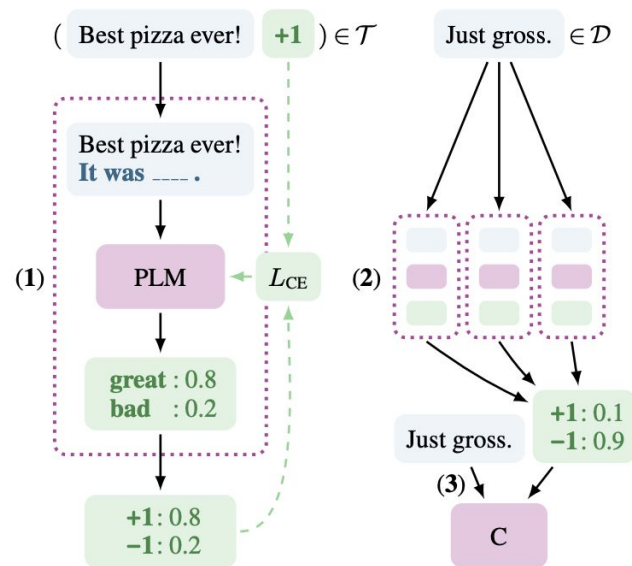


Figure 1: PET for sentiment classification. (1) A number of patterns encoding some form of task description are created to convert training examples to cloze questions; for each pattern, a pretrained language model is finetuned. (2) The ensemble of trained models annotates unlabeled data. (3) A classifier is trained on the resulting soft-labeled dataset.

Assignments

Team 1: Presenting the main idea of the paper

- Give background, discuss (briefly) about relevant previous work.
- What is the motivation for this work?
- Discuss the main contribution of the paper.
- Present the algorithm (focus on PET, you can also talk about iPET briefly).

Assignments

Team 2: Presenting the experimental setup and results

- Present the experimented tasks.
- Explain the idea of low resource setting. How is this reflected in the experiments?
- Talk about main baselines (supervised/semi-supervised).
- Discuss main results and conclusions.

Assignments

Team 3: Experiment PET on Yelp (Table 1) and create your own verbalizers and patterns.

- Compare your results with the ones PET achieves in the original paper.
- Does/How the patterns/verbalizers affect the downstream results?

Assignments

Team 4: Experiment PET on a new dataset (Airline Reviews Corpus for Binary Sentiment Classification, [Link](#))

- Does PET works well with longer text?
- Did the same patterns and verbalizers work (as the ones used for Yelp, positive=great, negative=horrible)?

Assignments

Team 5 (optional): Be a reviewer :)

- How innovative was the paper?
- Which work followed it?
- Which work did it followed?
- What are the strengths of the proposed solution?
- Talk about limitations.

Questions

[Paper Link](#)

[Official Git Repo](#)