Assignment 4: Two Exclusive Options: A XOR B

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Machine Learning for NLP 1

Assignment 4: Option A: Paper Dissection

Identify an interesting and high-quality (short) NLP paper

- Interesting: landmark paper from lecture/reading or ACL
- Interesting: paper from nlpprogress.com or on HF Leaderboards
- If paper is long and covers many Machine Learning approaches, focus on the best or clearest setup

Understand the paper

- Read the paper "quickly and efficiently"
- Go along the IMRaD schema (next slide)
- If you don't understand some concepts, search introductory resources (WP pages, quora, book chapters, chatgpt, blogs, videos) that help.
- But do not waste too much time into researching things that are totally unclear. Try to formulate/pinpoint what you don't understand and what is unclear.

IMRaD: Introduction, Methods, Results and Discussion[1]

Efficient reading order may not be linear order

- Abstract
- Conclusion
- Look at examples/figures/tables
- Introduction
- Methods
- Results
- Discussion

[1] https://francescolelli.info/thesis/read-scientific-papers-quickly-and-effectively/

Writing Your Paper Dissection: Max. 2 Pages

Follow these questions in order!

1. What is it about? What problem does it try to solve? Why is it interesting?
2. Which ML methods are used? What is the main innovation of the paper?
3. What are the takeaways?
4. What are possible problems of the approach? Think critically!

Some rules

- What does one need to know for understanding the paper? List the resources that were helpful for you.
- You can also copy/paste the most important figure/table
- You can add a mind map if you like
- Do not just use ChatGPT output!

Option B: Short Student Talk

- 8 minutes + 2 minutes questions
- In 3 slots in class, 3 slots in tutorial in November/December sessions
- Or: create a short screencast (e.g. with Screencastify▲) for "future" students (no perfectionism asked for!); e.g. a walkthrough to a code example

Topics

- A (short) paper on a technical or social/ethical aspect of ML in NLP
- A technical topic: GPU/TPUs; hierarchical Softmax; feature hashing; different optimizers (Adam); walkthrough of the code of a paper (Papers with Code▲)

Organization and Deadlines

For this exercise, you can team up in pairs or work alone. Yes, no teams of 3 students allowed.
Communicate your topics and suggestions via Feedback-Forum in OLAT

- For talks: Reply ASAP in forum thread "Student Talks" in OLAT and email me at the same time.
- Paper dissections: Friday 19.1.2024 23:59: Hand-in your PDF in OLAT
- Screencasts: Friday 19.1.2024 23:59: Hand-in Link to screencast in OLAT