Seminar Advanced NLP Intro Session

Master-Seminar – Advanced Techniques in Natural Language Processing (IN2107, IN4428)

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Contents

• Developments in NLP
• This Seminar (Dates, Expectations, Guidelines)
• Topics
• Next Steps
Why this seminar?

• NLP is a fast-evolving field
• There are a lot of different facets to NLP research

• Two main goals:
  • Establish familiarity with current NLP research
  • Look at impactful scientific papers to understand what makes them impactful.
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Seminar Schedule

- Topic selection by next week ([mail](mailto:))
- Four / Six seminar sessions in December and January
- Seminar paper OR (tbd) blogpost style submission due by February 28th
Topic sessions

Seminar dates choice A:

• December 3\textsuperscript{rd} & December 17\textsuperscript{th}
• January 14\textsuperscript{th} & January 28\textsuperscript{th}
• Time: 10 am to 12 pm on Fridays
• 3 topics per meeting
Topic sessions

Seminar dates choice B:

- December 3\textsuperscript{rd} & December 17\textsuperscript{th}
- January 14\textsuperscript{th} & January 21\textsuperscript{st} & January 28\textsuperscript{th} & February 4\textsuperscript{th}
- Time: 10 am to 12 pm on Fridays
- 2 topics per meeting
Sessions

- Everyone must read the main paper for each topic
- You are encouraged to take notes and prepare questions on things that are unclear to you.
- There will be one expert on each topic who has prepared a presentation on the topic and has done additional background reading.
Presentations

• **25-minute length presentation** on your chosen topic
• Technical presentation on the contents of the main paper, including additional background info (which subfield of NLP or otherwise, extended related work, preliminaries to better understand the paper)
• **15–20-minute discussion** on the topic after each presentation
Seminar paper

Due date by February 28\textsuperscript{th} (Monday) “anywhere on earth”

- \textit{\textbf{\sim8 pages}} long (template see webpage)
- On your presentation topic in more detail
- Should include discussion on applications and impact of the work (!)
- Bonus: Can include ideas for future work
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Topics

**Topic 1: Renewing modern Deep NLP**
https://arxiv.org/abs/1706.03762

**Topic 2: (Perceived) Transparency of NLP Models**
Sarthak Jain, Byron C. Wallace. Attention is not Explanation. NAACL 2019.  
https://aclanthology.org/N19-1357/
Topics

**Topic 3: Complex Representations**
https://aclanthology.org/N19-1423/

**Topic 4: Benefits of the Compute Arms Race**
https://arxiv.org/abs/1911.11423
Topics

**Topic 5: Intrinsic Knowledge through Language**
https://aclanthology.org/2020.emnlp-main.437/

**Topic 6: Probabilistic Assumptions of NLP**
Clara Meister, Tim Vieira, Ryan Cotterell (2020). If beam search is the answer, what was the question? EMNLP 2020
https://aclanthology.org/2020.emnlp-main.170/
Topics

**Topic 7: Size Matters Most?**
https://papers.nips.cc/paper/2020/hash/1457c0d6bfc4967418bfb8ac142f64a-Abstract.html

**Topic 8: Grounding Language Processing**
Yonatan Bisk, Ari Holtzman et al. (2020). Experience Grounds Language. EMNLP 2020
https://aclanthology.org/2020.emnlp-main.703/
Topics

Topic 9: Learning to Learn

Topic 10: Adapting Models to the Task
Topics

Topic 11: Beyond Transformers

Topic 12: Learning without Forgetting
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Next Steps

- Think about which topics you’re most interested in
- Your own topic ideas are also welcome
- Selection of topics: Send me a mail until Oct 29th stating at least 3 preferences and if you prefer 4 or 6 sessions.
- Topics and schedule will be announced on November 2nd (mail and website)
Questions?