Seminar Natural Language Processing (NLP) — Part 2

Overview of Seminar Topics

Henning Wachsmuth

https://ai.uni-hannover.de

Natural Language Processing

Leibniz Universität Hannover

Assignment of seminar topics

- **This talk**
  - Overview of 13 possible seminar topics, presented by the respective advisors
  - For each topic, one paper is given that provides the basis of the topic

- **Concept behind**
  - Each seminar participant will be assigned one topic
  - The paper should be the focus of the talk and of the article
  - Further literature on basics and related work should be added where useful
  - You have to choose topic preferences, we then assign topics

- **Your task**
  - Inform yourself about the topics and papers in this presentation
  - Choose 3 topics with preferences
  - Until Monday, October 23, 23:59 UTC+2. Send e-mail with preferences
    Both direct e-mail and Stud.IP message are fine.

Choosing preferences: eMail and subsequent process

- **Your e-mail**

  - Recipient. h.wachsmuth@ai.uni-hannover.de

  - Subject. "[nlp] Topic preferences"

  - Content. Your name, matriculation number, and 3 topic preferences

  - Example. On the right, you see how the content of your e-mail could look like

Name:
Timon Ziegenbein
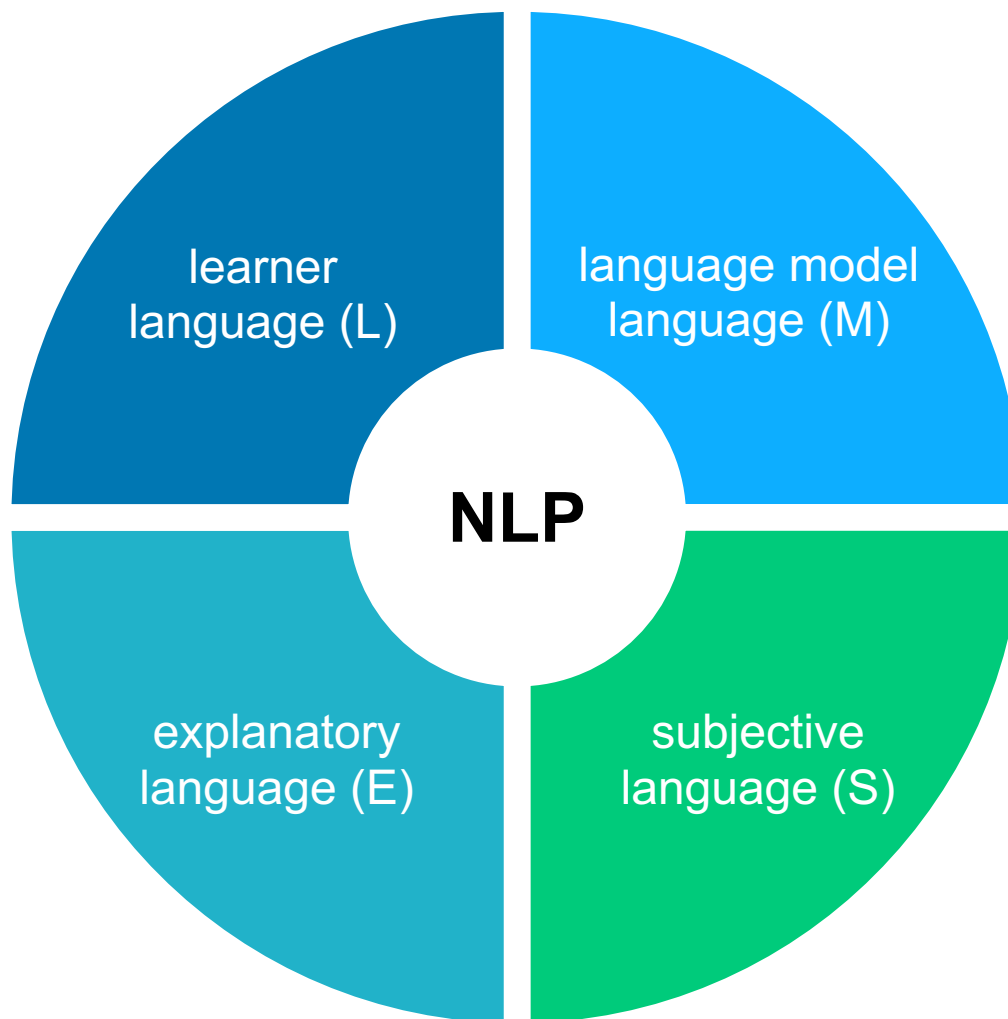
Matriculation number:
1234567

Topic preferences:
1) S5. Reframing Unhelpful Thoughts
2) E2. Explaining figurative language
3) S1. Jointly modeling metaphors and emotions

- **Subsequent process**

  - We will assign topics based on preferences, special reasons, and randomly

  - If you don't send your e-mail in time, you will *not* be assigned any topic

  - The final schedule will be decided based on the topic assignment
    You can get a rough idea of the schedule from the ordering on the next slides.

  - Topic assignment and schedule will be announced until the next session

Overview of topics

Seminar topics organized into four areas

Topics for the seminar talks and articles (1 out of 2)

- **Learner language**

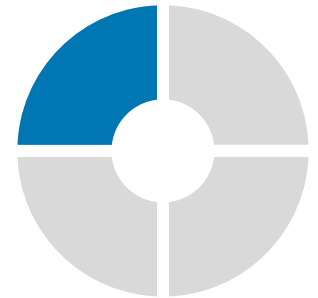 L1. Quality Prediction of Argumentative Revisions   Maja

  L2. Unsupervised Automated Essay Scoring   Maja

  L3. Exercise Generation for Language Learning   Maja

- **Explanatory language**

  E1. Human-Annotated Explanation Scoring   Leandra

  E2. Explaining Figurative Language   Meghdut

More on next slide…

Topics for the seminar talks and articles

- **Subjective language**

  S1. Jointly Modeling Metaphors and Emotions — Meghdut

  S2. Metaphors and Emotion in Political Discourse — Meghdut

  S3. Modeling Appropriate Language in Argumentation — Timon

  S4. Automated Improvement of Toxic Language — Timon

  S5. Reframing Unhelpful Thoughts — Gabriella

- **Language model language**

  M1. Arbritrary Text Style Transfer — Timon

  M2. Semantic Priming of Language Models — Yamen

  M3. Social Bias Mitigation in Language Models — Max

Topics and literature

Topics supervised by Maja and Leandra

L1. Quality Prediction of Argumentative Revisions

- Zhexiong Liu, Diane Litman, Elaine Wang, Lindsay Matsumura, Richard Correnti. 2023. Predicting the Quality of Revisions in Argumentative Writing. https://aclanthology.org/2023.bea-1.24/

L2. Unsupervised Automated Essay Scoring

- Cong Wang, Zhiwei Jiang, Yafeng Yin, Zifeng Cheng, Shiping Ge, Qing Gu. 2023. Aggregating Multiple Heuristic Signals as Supervision for Unsupervised Automated Essay Scoring. https://aclanthology.org/2023.acl-long.782/

L3. Exercise Generation for Language Learning

- Peng Cui, Mrinmaya Sachan. 2023. Adaptive and Personalized Exercise Generation for Online Language Learning. https://aclanthology.org/2023.acl-long.567/

E1. Human-Annotated Explanation Scoring

- Bingsheng Yao, Prithviraj Sen, Lucian Popa, James Hendler, Dakuo Wang. 2023. Are Human Explanations Always Helpful? Towards Objective Evaluation of Human Natural Language Explanations. https://aclanthology.org/2023.acl-long.821/

Topics supervised by Timon and Gabriella

S3. Modeling Appropriate Language in Argumentation

- Timon Ziegenbein, Shahbaz Syed, Felix Lange, Martin Potthast, and Henning Wachsmuth. 2023. Modeling Appropriate Language in Argumentation. https://aclanthology.org/2023.acl-long.238/
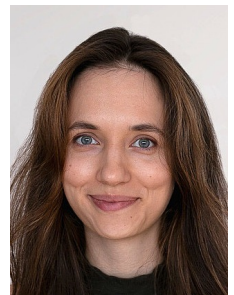
S4. Automated Improvement of Toxic Language

- Léo Laugier, John Pavlopoulos, Jeffrey Sorensen, and Lucas Dixon. 2021. Civil Rephrases Of Toxic Texts With Self-Supervised Transformers. https://aclanthology.org/2021.eacl-main.124/

M1. Arbritrary Text Style Transfer

- Mirac Suzgun, Luke Melas-Kyriazi, and Dan Jurafsky. 2022. Prompt-and-Rerank: A Method for Zero-Shot and Few-Shot Arbitrary Textual Style Transfer with Small Language Models. https://aclanthology.org/2022.emnlp-main.141/

S5. Reframing Unhelpful Thoughts

- Mounica Maddela, Megan Ung, Jing Xu, Andrea Madotto, Heather Foran, and Y-Lan Boureau. 2023. Training Models to Generate, Recognize, and Reframe Unhelpful Thoughts. https://aclanthology.org/2023.acl-long.763/

Topics supervised by Yamen, Meghdut, and Max

M2. Semantic Priming of Language Models

- Kanishka Misra, Allyson Ettinger, Julia Rayz. 2020. Exploring BERT's Sensitivity to Lexical Cues using Tests from Semantic Priming. https://aclanthology.org/2020.findings-emnlp.415/

E2. Explaining Figurative Language

- Tuhin Chakrabarty, Arkady Saakyan, Debanjan Ghosh, Smaranda Muresan. 2022. FLUTE: Figurative Language Understanding through Textual Explanations. https://aclanthology.org/2022.emnlp-main.481/

S1. Jointly Modeling Metaphors and Emotions

- Verna Dankers, Marek Rei, Martha Lewis, Ekaterina Shutova. 2019. Modelling the interplay of metaphor and emotion through multitask learning. https://aclanthology.org/D19-1227/

S2. Modeling Metaphor and Emotion in Political Discourse

- Pere-Lluıs, Huguet Cabot, Verna Dankers, David Abadi, Agneta Fischer, Ekaterina Shutova. 2020. The Pragmatics behind Politics: Modelling Metaphor, Framing and Emotion in Political Discourse. https://aclanthology.org/2020.findings-emnlp.402/

M3. Social Bias Mitigation in Language Models

- Yingji Li, Mengnan Du, Xin Wang, Ying Wang. 2023. Prompt Tuning Pushes Farther, Contrastive Learning Pulls Closer: A Two-Stage Approach to Mitigate Social Biases. https://aclanthology.org/2023.acl-long.797/

Sum-up

Conclusion

- **Seminar topics**
  - 13 candidate topics related to four research areas
  - Each of you will be assigned one of these topics
  - Given (+ further) literature forms the basis of talk and article

- **Topic assignment**
  - You choose topic preferences, we assign topics
  - Inform yourself about the topics of the given literature
  - Send me your topic preferences by Monday next week!

- **Next up**
  - Topic assignment will be announced in the next session
  - Talk preparation starts then
  - Basics of scientific presentation in the weak afterwards