

Preliminary Meeting Seminar Advanced NLP WS 2024

Master-Seminar – Advanced NLP / Advanced Techniques in NLP (IN2107)

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TUM Uhrenturm

Outline

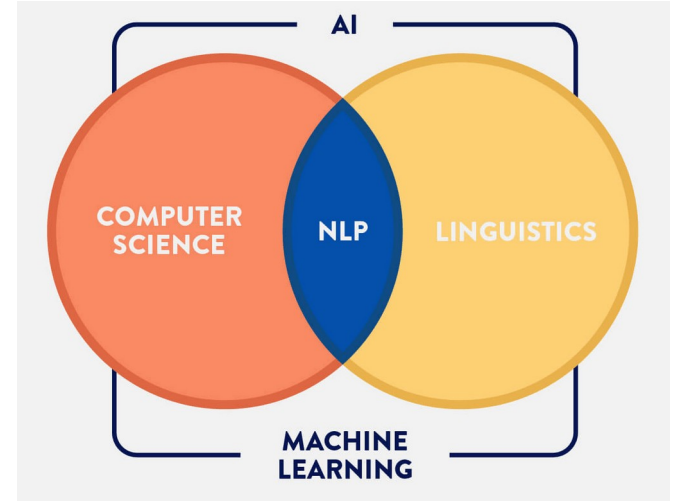
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About this course

NLP has been one of the fastest growing fields in Machine Learning research over the past 10 years.

This seminar wants to look at the current developments in NLP and understand the big picture of where NLP research is headed and what problems it is facing today.

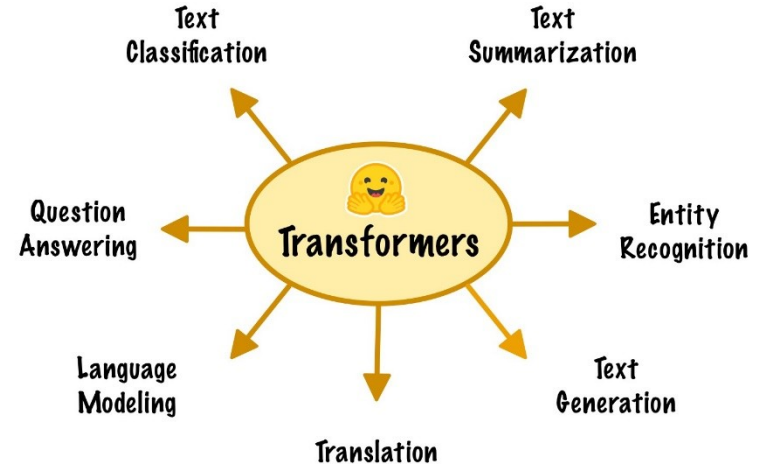
For this we want to look at new developments within the last two years from different application fields of NLP.



About this course

Why you should take this course:

- NLP is a fast-developing field with lots of big players involved and major conferences hosted each year.
- You are interested in doing a thesis on an NLP topic or want to work or do research in the field.
- You want to get an introduction into different kinds of NLP systems and the problems they deal with.
- You want to bridge the gap in knowledge between the basics of ML and Deep Learning or classic NLP systems and modern NLP applications.



Semester plan

- At the start of the semester there will be an introductory session to cover basics.
- After the intro sessions individual topics will be distributed.
- You will prepare a (~25-minute) presentation for your topic / paper.
- Presentations will be held in a regular seminar slot at a rate of 3 presentations per week.
- Everyone who is not presenting is supposed to read the main papers for each session (one for each presentation) to contribute to the discussion.

Deliverables:

- 25-minute presentation.
- ~8-page seminar paper (Deadline end of February) on your topic.
- Alternatively: Blogpost style “seminar paper”
- Keeping up with the required reading each week.
- Attendance and participation during sessions.

Your profile

Minimum:

- Master's level student of any discipline
- Basic knowledge about Natural Language Processing

Important:

- Basic knowledge about machine learning and deep learning
- Basic proficiency in at least one programming language

Optimal:

- Knowledge about current issues in NLP research
- Some experience tackling practical machine learning problems

Topic examples

Some example topics we will discuss in the seminar (list not complete or final):

- Developments in attention-based models
- Few-shot and one-shot learning approaches
- Multitask learning
- Masked language modeling
- Cross-lingual alignment techniques
- Prompting techniques

Each topic will also deal with an example application such as aspect-based sentiment analysis, automated summarization or machine translation.

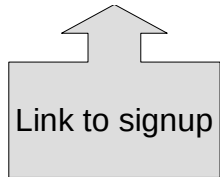


Applying for a spot

- Until **16th July**, fill out the registration form



- This will be the basis for us doing the matching from our side.
- From **13th to 16th of July**, you also have to register for the course on the [matching system](#)!
- Around the **29th of July**, you are (probably) notified by the matching system about the status of participation.
- If you get assigned to the course, you will be then sent an E-Mail with further steps.



Questions?