CS-612

Topics in Natural Language Processing

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Cursus	Sem.	Type
Computer and Communication Sciences		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral
Workload	60h
Hours	**28**
Courses	28
Number of positions	

Frequency

Every year

Remark

Not offered this year

Summary

This seminar course explores advanced topics in natural language processing through a mix of reading, reviewing, and writing academic papers.

Content

Natural language processing technologies have become ubiquitous tools in modern life, powering search engines, conversational agents, translation services, and many business applications. In recent years, NLP methods based on machine learning have become the core drivers of progress toward general natural language understanding. Their flexibility allows for rapid adaptation to new tasks, new domains, and new problems, but often at the cost of interpretability and robustness. The goal of this seminar is to introduce students to the most advanced methods in natural language processing, their shortcomings, and fruitful directions for continued investigation.

Students will be expected to read, review, present, and discuss relevant research papers in this area. Every week, they will be responsible for reading one or more research papers that are relevant to a topics of focus for that particularly week. One or more students will prepare a presentation highlighting the important points of the paper and leading a discussion around those points. All students will be responsible for reading the paper and contributing to the discussion of the paper's merits and weaknesses.

Over the course of the seminar, students will learn to critically read NLP research papers, critique work in this area, and propose extensions of current methods.

Keywords

natural language processing, representation learning, knowledge graphs, reasoning

Learning Prerequisites

Required courses

CS-433

Recommended courses

CS-431

Assessment methods

Oral