SS 2026
Lecture / Exercise
Automatic Speech Recognition Search

Type	Schedule / Room	Start	Lecturer
V2 Ü1	check RWTHonline	check RWTHonline	PD Dr. Ralf Schlüter Z. Yang

Content

- Introduction to ASR decision theory and modeling.
- Large vocabulary speech recognition.
- Lexical prefix tree search.
- Across-word modeling.
- Time-conditioned search.
- Refined search approaches.
- Search space representations and applications.

The lecture covers advanced aspects of automatic speech recognition decoding. Special emphasis is put on decoding/search beyond linear lexica, search based on advanced modelling, alternative search organization, advanced beam search and multi-pass approaches.

Assignment:

Applied Computer Science or Field of Specialization

Requirements:

Modul (Fundamentals of) Automatic Speech Recognition or comparable knowledge in the field of automatic speech recognition.

References:

- F. Jelinek: "Statistical Methods for Speech Recognition", MIT Press, Cambridge, MA, 1998.
- D. Jurafsky, D. H. Martin: "Speech and Language Processing", Prentice Hall, Englewood Cliffs, NJ, 2000.
- R. De Mori: "Spoken Dialogues with Computers", Academic Press, London, 1998.
- Current publications on automatic speech recognition.

Others:

The lecture will be given in English.
For more information, please contact:

Priv.-Doz. Dr. Ralf Schlüter
Machine Learning and Human Language Technology (MLHLT) Group
Lehrstuhl Informatik 6
E-Mail: schlueter@ml.rwth-aachen.de