

SS 2025

Laboratory Course

Automatic Speech Recognition

Type	Schedule / Room	Start	Instructor
P4	check RWTHonline	check RWTHonline	Priv.-Doz. Dr. Ralf Schlüter Simon Berger

Content:

The course will cover the implementation of a dynamic decoding algorithm for automatic speech recognition in C++. Given the trained probabilistic models, the goal of such a search algorithm is to find the most probable word sequence. Based on the state-of-the-art speech recognition software of the chair, we will implement a fast variant of a dynamic search method. To reduce the search effort, we will apply several pruning techniques. Finally, we will evaluate the software on a recognition task.

Assignment:

Applied Computer Science/ Field of Specialization

Requirements:

- Bachelor
- Participation in at least one of the lectures "Introduction to Statistical Classification", "Introduction to Automatic Speech Recognition", or "Introduction to Statistical Methods in Natural Language Processing" is compulsory.
- If a "Leistungsnachweis" was done in one of the above lectures, the participation in the seminar is guaranteed.
- Practical experience with the programming language C/C++ are helpful.

References:

Lecture notes und References from lecture "Introduction to Automatic Speech Recognition" and "Advanced Methods in Automatic Speech Recognition"

Others:

The first meeting will take place at the beginning of the term. In agreement with the participants the lab course will take place during the term or as a block at the end of the term. Among others its goal is to introduce candidates of Hiwi-jobs and theses to the methods used at the Lehrstuhl Informatik 6.

Enquiries to:

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