Modulbezeichnung:	**Seminar Digital Pathology using Speech Language Processing (Sem.DPSLP) (Sem.DPSLP)** (Seminar Digital Pathology using Speech Language Processing (Sem.DPSLP))	**2.5 ECTS**
Modulverantwortliche/r:	Kubilay Can Demir, Tobias Weise	
Lehrende:	Seung Hee Yang	

Startsemester: WS 2021/2022	Dauer: 1 Semester	Turnus: halbjährlich (WS+SS)
Präsenzzeit: 30 Std.	Eigenstudium: 45 Std.	Sprache: Englisch

Lehrveranstaltungen:

The task of automatic speech recognition translates spoken language into text. It is an interdisciplinary subfield of computer science and computational linguistics that develops methodologies and technologies. The participants will have lectures in speech recognition, speech production, analysis, filter bank, cepstrum, feature extraction for ASR. linguistic categories for speech recognition, and neural networks for acoustic modelling and language modelling. The lectures will be accompanied by student presentations on the recent research papers published in INTERSPEECH and ICASSP.

Interpretation and Analysis of Neural and Muscle Signals (WS 2021/2022, Seminar, 2 SWS, Alessandro Del Vecchio et al.)

Deep Learning Exercises (WS 2021/2022, Übung, 2 SWS, Zijin Yang et al.)

Inhalt:

The task of automatic speech recognition translates spoken language into text. It is an interdisciplinary subfield of computer science and computational linguistics that develops methodologies and technologies. The participants will have lectures in speech recognition, speech production, analysis, filter bank, cepstrum, feature extraction for ASR. linguistic categories for speech recognition, and neural networks for acoustic modelling and language modelling. The lectures will be accompanied by student presentations on the recent research papers published in INTERSPEECH and ICASSP.

Lernziele und Kompetenzen:

Fachkompetenz

Verstehen

The learners will gain understanding of automatic speech recognition.

Anwenden

The learners will be able to build their own speech recogniser.

Analysieren

The learners can break down the problem of automatic speech recognition in terms of algorithms and linguistics.

Literatur:

[1] Jurafsky, Dan. Speech & language processing. Pearson Education India, 2000. [2[Yu, Dong, and Li Deng. Automatic Speech Recognition. Springer london limited, 2016. [3] Jurafsky, Dan, and Christopher Manning. "Natural language processing." Instructor 212.998 (2012): 3482. [4] Haykin, Simon. Neural networks and learning machines, 3/E. Pearson Education India, 2010.

Studien-/Prüfungsleistungen:

Seminar Digital Pathology using Speech Language Processing (Sem.DPSLP) (Prüfungsnummer: 882806)
(englische Bezeichnung: Seminar Digital Pathology using Speech Language Processing (Sem.DPSLP))

mündliche Prüfung, Dauer (in Minuten): 30 Prüfungssprache: Englisch

Erstablegung: WS 2021/2022, 1. Wdh.: SS 2022
1. Prüfer: Seung Hee Yang (100980), 2. Prüfer: Seung Hee Yang (100980)