

COURSE DETAIL

MULTI-MODAL MACHINE LEARNING

Country

China

Host Institution

Tsinghua University

Program(s)

Tsinghua University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

172

UCEAP Course Suffix**UCEAP Official Title**

MULTI-MODAL MACHINE LEARNING

UCEAP Transcript Title

MULTI-MODAL MACHINE

UCEAP Quarter Units

3.00

UCEAP Semester Units

2.00

Course Description

With the development of Internet, multimedia data have become increasingly accessible, such as images, audios, videos, texts, etc.; the advances of artificial neural networks (e.g. large multi-modal model GPT4) have also made multimodal fusion a general trend in AI. This course covers applications including image/video processing generation, audio/ speech processing and generation, natural language processing and generation. It introduces popular signal processing and machine learning techniques in the artificial intelligence field, such as data representation, data compression, sequence models, data synthesis, multimodal fusion, etc. Through lectures and course projects, students learn about the features of different signals, and their common ground.

Language(s) of Instruction

English

Host Institution Course Number

40470492

Host Institution Course Title

MULTI-MODAL MACHINE LEARNING

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

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