FDM3304 Generative AI for Media Technology and Interaction Design 7.5 credits

Generativ AI för medieteknik och interaktionsdesign

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for FDM3304 valid from Spring 2025

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

The upper secondary course English B/6.
Documented knowledge in theory of knowledge and research methodology, 7,5 credits, corresponding to completed course DM2713.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student should be able to:

- describe the fundamental theoretical and conceptual bases of generative AI
- describe how generative AI has been developed historically
- describe the application space for generative AI
- analyse and describe possibilities and limitations to create texts and other content with generative AI
- use generative AI to create content as texts, images, number, music and video
- design prompts to improve the reasoning capabilities of Large Language Models (LLMs)
- use application programming interfaces for generative AI
- analyse the possibilities about how generative AI should be able to support creativity
- analyse ethical challenges and risks with generative AI as for instance ownership and independence related to digital content that partly or completely has been generated with AI
- analyze applications of generative AI from critical and ethical perspectives to determine situations and contexts wherein deployment of generative AI ought to be limited or altogether avoided
- analyse and discuss possibilities with generative AI in relation to sustainability
- assess and discuss questions around equal opportunities, diversity and equal conditions related to generative AI in order to be able to use generative AI for media technology and human computer interaction from human, ethical and sustainable perspectives.

Course contents

The bases of generative artificial intelligence, AI (historical, theoretical, conceptual and practical). Large multimodal models and prompting engineering.
Common applications of generative AI (including trends).
Application programming interfaces for generative AI.
Creativity and generative AI (views on creativity, art and artistic work and related applications of generative AI).
Generative production in media, generative design and art.
Education and generative AI (challenges, possibilities and risks).
Ethical perspectives on use of generative AI (for example values, independence and ownership). Gender equality, diversity and equally conditions perspectives and problems for generative AI (for example gender partiality).
The future for generative AI (the development we can expect).

Examination

- LIT1 - Literature assignment, 2.5 credits, grading scale: P, F
- PRO1 - Projektarbete, 5.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.