Intelligent Virtual Agents and Social Robots

Single subject and programme course

6 credits

Intelligenta virtuella agenter och sociala robotar

769A12

Valid from: 2019 Autumn semester

Determined by
Course and Programme Syllabus Board
at the Faculty of Arts and Sciences

Date determined
2019-06-13

Main field of study
Cognitive Science

Course level
Second cycle

Advancement level
A1N

Course offered for
- Master Programme in Cognitive Science

Entry requirements
- Bachelor's Degree in Cognitive Science equivalent to a Swedish Kandidatexamen
  or
  Bachelor's Degree in Computer Science equivalent to a Swedish Kandidatexamen
  and
  30 ECTS credits in one of the following subject areas
  - Psychology
  - Linguistics
  - Philosophy
  - Neuroscience
  - Anthropology

  or
  Bachelor's Degree in Psychology of Neuroscience equivalent to a Swedish Kandidatexamen
  30 ECTS credits passed in Computer Science

- English and Swedish corresponding to the level of English and Swedish in Swedish upper secondary education (Engelska 6 and Svenska 3)

Intended learning outcomes

The course covers theories, methods and technology in the research front of the area. It aims to provide an understanding of current theoretical issues as well as practical knowledge of implementation and/or evaluation of agent- or robot-based interactive systems with focus on the interaction between humans and such systems.

After completion of the course, the student should at an advanced level be able to:

- account for and critically discuss theories and models within the disciplines of Human Factors and Resilience Engineering
- apply methods to analyze human factors in complex systems
- identify, delimit, and analyze a man-machine system from a Human Factors or Resilience Engineering perspective

Course content

The course covers the following theoretical areas:

- Interaction: natural language, body language
- Cooperation and Trust
- Emotion
- Embodiment
- Visual appearance: gender, ethnicity, anthropomorphism
- Application areas: learning, training, health, entertainment

The project focus on design, implementation or evaluation of an interactive application with a virtual embodied agent or a robot.

Teaching and working methods

The course consist of an introductory lecture, several student led literature seminars, practical project work, and seminars for presentation and discussion of project work.

Examination

Mandatory participation in seminars. Written report and an oral presentation of the project work.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it. If the coordinator has instead recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

Three-grade scale, U, G, VG

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

Department

Institutionen för datavetenskap