Methods of Artificial Intelligence: Lecture

1. Session: Organization

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Overview

- Organizational Issues
- Some Specific Features
- Tentative Content of the Course
- Requirements to Pass the Course

Organizational Issues

- Teachers
  - Kai-Uwe Kühnberger (50/312): kkuehnbe@uos.de
  - Nohayr Muhammad (50/303): nohayr.muhammad.abdelmoneim@uos.de
  - Helene Pretzler: hpretzler@uni-osnabrueck.de
  - Marlon Dammann: mdammann@uni-osnabrueck.de
- Course: Time and Place
  - Lecture: Friday 14:00 – 16:00; Room: 93/E06 and digital or pre-recorded
  - Tutorial 1: Tuesday 16:00 – 18:00; Room still unclear
  - Tutorial 2: Thursday 16:00 – 18:00; Room still unclear (potentially digital)
- Intended audience:
  - Bachelor Students (Cognitive Science)
  - Master students (Cognitive Science & Cognitive Computing)
- This course is recognized for the examination module "Artificial Intelligence" for
  - Cognitive Science Bachelor students ("Wahlpflichtmodul")
  - Cognitive Computing Part-Time Master students ("Schwerpunktmodul")
- The course is worth 4 ECTS credit points.

Organizational Issues

- This course is a obligatory course, if you choose AI to be one of your major fields in the Bachelor's program, i.e. the course is an obligatory part of the examination module "Artificial Intelligence".

- For Cognitive Science Master students it is an optional course.
  - This is a classification I would like to discuss with the study dean.

- Specification of this course
  - Lecture, i.e. the sessions are provided by the teachers.
  - Hybrid+, i.e. on-site sessions will be streamed and recorded.
    - Exception: session of the 23rd of December. This session will be a purely digital meeting via BBB due to energy saving reasons enforced for the whole university.

Organizational Issues

- What will happen in this course?
  - Lectures will be given either in-class or as pre-recorded videos.
  - In-class lectures are streamed and recorded.
  - If a lecture is pre-recorded (flipped classroom format)
    - You need to watch and learn the content in a self-paced manner.
    - You need to formulate a question about the lecture and send this question to the tutors in advance.
    - In class, we will discuss the submitted questions.
  - The tutorials are intended to clarify the content, to discuss topics in more depth, and to give a possibility to ask questions.
    - We will try to get rooms soon concerning the tutorials.

Tentative Content of the Course

1. Organization and Introduction to Local Search (04.11.2022)
2. Local Search Algorithms (11.11.2022)
3. Advanced Constraint Satisfaction Problems (18.11.2022)
4. Planning I (25.11.2022)
5. Planning II (02.12.2022)
6. Knowledge Representation I (09.12.2022)
7. Knowledge Representation II (16.12.2022)
8. Vagueness and Uncertainty I (23.12.2022)
9. Vagueness and Uncertainty II (13.01.2023)
10. Machine Learning Methodology (20.01.2023)
11. Random Forests and Support Vector Machines I (27.01.2023)
12. Random Forests and Support Vector Machines II (03.02.2023)
13. Exam (10.02.2023)
14. Cognitive Architectures (as video)

Organizational Issues

- Regulations for attending the course
  - You can attend the sessions in presence and as an online course.
  - The room hopefully suffices to give everybody the chance to participate in presence.

- In order to participate in presence, please notice:
  - My proposal would be to wear a mouth and nose protection for attendance in presence, if there are many people in class.
  - If you feel ill, use a form of digital attendance.

- If you have questions you can either send e-mails to the teachers and tutors or you can use the forum on StudIP.
  - Tutors will scan the forum on a regular basis.

Organizational Issues

- Prerequisites for the course
  - Desirable: Introduction to Mathematics
  - Desirable: Introduction to Computer Science
  - Desirable: Introduction to Artificial Intelligence (no Prolog needed)

- The Methods of AI: Lecture course continues the Introduction to AI from the summer term 2022.
  - Several topics will reappear in the Methods class.
  - It is not mandatory to have taken the Intro to AI class to participate in the Methods of AI: Lecture

- Notice
  - It is possible to take the “Methods of AI: Lecture” without the seminar.
  - It is not recommended to take the “Methods of AI: Seminar” without participating in the lecture.

Organizational Issues: Requirements

- What you need to do to get a certificate:
  - Solve tasks of VIPS quizzes (provided weekly); pass/fail at 50%
  - Final exam determines the grade

- Final exam
  - Probably we will write the final exam on the last Friday of the semester
  - There will be a replacement exam in the first weeks of the summer term 2023.

QUESTIONS?