The course assignment has three components:

1) A hands-on empirical task,
2) an essay, and
3) a presentation on the essay topic.

Tasks (1) and (3) are voluntary and do not necessarily need to be taken on. Only (2) is required for passing the course. All subtasks yield extra points for course grading. Tasks (1) and (2) both yield max 5 points and the max for (3) is 3 points.

The compulsory home work in the course is to write an essay on a freely chosen topic that is related to artificial intelligence in a reasonable way. You may choose a topic of your interest (after receiving an ok either from the lecturer Tapio Elomaa or Juho Lauri) or choose a topic from the list of potential candidates provided below. Appropriate length for the essay is 5–10 pages (using a reasonable font size and margins) and it should be written in English. The topic is not supposed to be new, but it should not only be based on the lectures. You may deal with a topic that is connected to the lectures, but you need to provide additional information from new sources. A suitable topic is a general overview on a research field, introduction to a specific topic, or something in between these extremes.

The essay must begin with an abstract of the contents. The main content is divided into sections and it ends with the list of references. You need to base your essay on at least three articles and they have to be referenced in the text. Own contributed text and citations have to be separated clearly. Whenever you make a claim which cannot be seen to be common knowledge among computer scientists, it has to be made clear from which source the claim comes from.

The intended audience for the essay is your fellow students knowledgeable in computer science and quick to learn, but no experts on the specific topic of your study. The essay should first introduce the background and required concepts for understanding details of its topic. The essay will be graded on the basis of general appearance, structure, language, and interestingness on the scale 0–5.

A short (15 min) presentation on the essay may be given on April. The presentation yields up to 3 extra points. Prepare to distribute some copies of your essay (or its short version) for the audience.

**Plagiarism is strictly prohibited. Do not base your essay on Wikipedia alone.**

Deadline for the essay is May 8, 2016. Please deliver your essay to Juho Lauri preferably as pdf file.

All tasks can be executed in groups of 1–3 students. Please try to self-organize into groups. We can try to match people with similar interests. Give us an e-mail if you cannot find collaborators on your own.

Possible topics for the essay and presentation are given e.g. in [http://www.aaai.org/Conferences/AAAI/2016/aaai16keywords.php](http://www.aaai.org/Conferences/AAAI/2016/aaai16keywords.php). You can modify the general topics by specifying a given key word or combining two key words into one topic. We particularly recommend categories:

You may also propose a topic of your own. Please reserve a topic/confirm the suitability of your own topic with Juho (http://math.tut.fi/~laurij/).

The length of the essay is 5-10 pages. Groups with more members are expected to produce longer essays than students working on their own. The presentation length should be 15 minutes (not too many slides). Instructions for task (1) are given in http://math.tut.fi/~laurij/ai-assignment/.

TIMETABLE

April    presentations organized (time and place announced later)
May 4    course exam
May 8    deadline for tasks (1) and (2)