

# Individual assignment IN5480 - First iteration

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1. **Search and find three definitions of AI, describe these briefly. Make references.**

For the three definitions on AI I choose to first look at the one from Wikipedia because it is the biggest encyclopedia we have on the internet and also the first thing that comes up when you search for AI on the internet.

Wikipedia defines AI as intelligence that takes place in machines and not humans or animal as natural intelligence is. Beyond this they explain the research around AI as artifacts that can take actions that increases its chances of reaching their goals(Wikipedia, 2018).

Oxford dictionary explains AI as a theory and the development of computers that can perform tasks where previously demanding human intelligence(Oxford dictionary, 2018).

2. **Search and find three definitions of Robotics, describe these briefly.**

Wikipedia defines Robotics as a field within engineering and sciences that also includes mechanical engineering, electronics engineering and computer science. Robotics includes information processing and computer systems as well as design, construction, operation and the actual use of robots(Wikipedia, 2018).

Oxford dictionary explains Robotics as a category within technology that concerns design, construction, operation and the application of robots (Oxford dictionary, 2018).

Nasa explains robotics as the study of robots and that robots are machines that are used to perform work. Robots are sometimes controlled by a human, and other robots can perform work on their

own(May, 2017).

- 3. Search and find three definitions of Machine Learning, describe these briefly.**

Wikipedia defines machine learning as a branch of computer science, where statistical techniques are used to make the computer systems the ability to learn from data(Wikipedia, 2018).

Oxford dictionary defines machine learning as a computer capacity to learn from previous experience. Computer systems that can modify processing of new information(Oxford dictionary, 2018).

Google's own developer team describe machine learning as a system that builds or trains a predictive model from input data. (Google, 2018)

- 4. Write in three to five sentences the relationship between AI and Robotics as you understand this.**

I understand robotics as a study of robots with different abilities, where artificial intelligence is understood as a large part of these abilities. Where robotics are a major subject, I look at AI as a narrowed part of robotics.

- 5. Make a text to describe your own definition of AI. Explain briefly this definition.**

Artificial intelligence is the perception of smart machines that are given abilities resembling human intelligence. These can be skills such as recognizing speech, interpreting complex content, making decisions and learning from their own mistakes.

6. **Make a drawing of an interaction with an AI - something that you imagine. Describe with some sentences your drawing.**



7. **Read the article: "On the Subject of Objects: Four Views on Object Perception and Tool Use" by Tarja Susi / Tom Ziemke. Write in your own words one page about the different perspectives on the human relationship with tools.**

The article takes a look at artifacts and their environment and the relation between subject and object. It provides four different views that try to explain this relationship. First it looks at the german biologist Jacob von Uexküll's *functional tone*, then the german philosopher Martin Heidegger's *equipment*, further on the american psychologist James J. Gibson's *affordance* and at last David Kirsch's *entry point*.

### **Functional tone**

Uexküll explains that it is you as a subject that gives meaning to an artifact based on properties such as mood and context. A chair can be something that you can sit on, or e.g. a weapon. A subject gets its meaning through its function. We can all live in the same environment but have completely different experience of the environment.

### **Equipment**

Heidegger explains that we can't look at subject and object as two individual entities, but that we rather should look at their relation to each other. There are different ways to look at an object, and after seeing it you can give it some kind of purpose. You can also use an object and then you might give it a new and maybe deeper meaning. The object or tool has to fit in to the context since the context gives it meaning.

### **Affordance**

Gibson talks about the mutual relationship between subject and object. He explains that each subject lives in an own niche and set of affordances. The affordances are always in relation to the subject. We can look at the unique combination of qualities that specifies what the object can afford us.

### **Entry point**

Kirsh explains how active subjects make use of environmental structures to conduct tasks. Entry points invite you to do something, a structure or a cue that represents an invitation to enter an information room or a task. Entry points are used to achieve cognitive affordance.

8. **Select one of the perspectives from the article, and go into detail when you describe it.**

I have explained all of the perspectives above.

9. **Select one other article from module 1, and write with your own words what this article is about.**

I choose the article "Does AI make PD obsolete? Exploring challenges from Artificial Intelligence to Participatory Design" by Tone Bratteteig and Guri Verne, because I am also taking a course in participatory design this semester. The article talks about both AI and PD and that classic PD methods still can be useful in design processes, but that AI still poses some challenges. The challenges explained in the article are

that the designers should be able to understand the technology they make, and that AI technology is hidden deep and one cannot foresee the effects of the design. The second challenge they talk about is for the PD participants to evaluate the design over time since AI develop differently. The last challenge they present concerns how to distinguish between normal use and training since the AI is trained while being used (Bratteteig & Verne, 2018).

10. **Select one documentary or a fictional film, book or game: describe with your own word how interaction with AI is portrayed in this work.**

The TV-serie 'Black Mirror' first episode in the second season portraits AI as a computer system that lets a widow speak and interact to her dead husband. The system goes through all of the digitale files of the dead person and learns to interact as he or she through analyzing all these digital footprints. The more access the system has to the digital footprints the more it can imitate the persons its analyzing. I don't want to spoil the episode, but it portraits a lot of the benefits and never the less the disadvantages with AI.

11. **Describe what you understand by autonomy; both human autonomy and machine autonomy.**

I understand human autonomy as ones free will and ones self independence. Machine autonomy on the other hand are machines that can operate on their own, with the ability to make decisions about its own actions without being directly influenced by an operator.

12. **When was the term "AI" first coined? Please make a reference.**

The term AI was first coined in 1955 by the american computer scientist John McCarthy (Childs, 2011)

13. **Articulate one question for the article "What we talk about when we talk about context" by Paul Dourish in the curriculum.**

Paul Dourish talks about two different views of context, what are the different views? Are there any similarities or are they completely different?

14. **Articulate one question for any other article in the curriculum.**

In the article "Does AI make PD obsolete? Exploring challenges from Artificial Intelligence to Participatory Design", Bratteteig and Verne argue that PD still is important, what are their main arguments?

## References

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