

F29AI - Artificial Intelligence and Intelligent Agents

Activity Sheet 1 – What is Artificial Intelligence?

These questions are meant to give you practice with some of the lecture material we are covering this week. For Week 1, the concepts are not very technical. Try to answer as many questions as you can and think about the material we've covered so far in the lectures and live sessions. When you are finished, you can submit your completed answers on Vision. Individual activity sheets will not be marked but general feedback will be provided based on the common problems we see.

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1. Imagine you have been tasked with designing an artificial agent that should interact with humans in a public square. Consider the aspects of your design that are important from an AI point of view. You are free to choose the specific task your agent will perform and to design your agent in whatever way you think is best. Answer the following questions about your agent.

a) Briefly describe the operation of your agent. Mention agent types and environment types.

b) Provide a PEAS description of your agent.

Performance measure:

Environment:

Actuators:

Sensors:

2. Watch the *Slaughterbots* video available on Vision or at:

<https://www.youtube.com/watch?v=9CO6M2HsoIA>

a) Do you think this video describes a realistic danger or is it just scaremongering? Why or why not?

b) Do you think the AI technology in the video will be possible? When?

3. Experiment with the chatbots listed below by trying to have a conversation with each one.

Eliza: <http://www.manifestation.com/neurotoys/eliza.php3>

Rose: <http://ec2-54-215-197-164.us-west-1.compute.amazonaws.com/speech.php>

Mitsuku: <https://www.pandorabots.com/mitsuku/>

a) Which chatbot did you like the best? Why did you choose this one?

b) Are any of these chatbots likely to pass a Turing Test? Why or why not?

c) Do you think the Turing Test is a fair test of intelligence? Why or why not?

d) Are there any changes you would make to improve the Turing Test?

e) Give a brief PEAS description for one of the chatbots.

4. Briefly describe how AI technology is being used in each of these application areas. You may use whatever web resources you can find to help answer the questions. Include a URL in your answer.

a) Online advertising?

b) Football coaching?

c) Ice cream?

5. What do you hope to take away from the AI course? Are there any AI topics that you are particularly interested in learning about?

6. How would you define AI in two sentences? Make a record of this somewhere (you don't need to include it here). You will be asked this again at the end of the course and asked to compare your two answers.