

Introduction to Symbolic AI Tasks WS 2018/19

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Task 1 - Define in your own words

- **Intelligence** is the ability to solve new problems by usage of existing knowledge. This requires the ability to acquire and store knowledge and its application.
- **Artificial Intelligence** is the attempt to mimic intelligence in systems created by humans.
- **Knowledge** is stored and accessible data
- **Learning** is the acquisition of new knowledge

Task 2 - Intelligence quotient

An IQ test only captures the ability to solve specific problems defined by the test. The performance in this test only scores the ability to solve these given tasks, therefore the high score of the computer program only tells us that this program is better at solving IQ tests than humans. Intelligence is not strictly defined. If our definition in Task 1 is used, this does not necessarily mean that the computer is more intelligent than a human because IQ test generally don't capture every scenario for which this definition is applicable.

Task - 3 AI in everyday life

- **Self driving cars** are only possible by using AI because of the dynamic challenges of driving.
- **Mobile assistants** are better at understanding their clients thanks to AI because they now learn how to interpret your tasks. Otherwise, you would have to use specific sentences/syntax to use them properly
- **Ads.** AI is used in the serving of ads on the internet to show the user personalized ads.
- **Microsofts chatbot Tay** was created for the purpose of learning how to interact with human users on twitter. There were very little constraints on her language output. This was abused by trolls which fed her with inflammatory and offensive tweets which caused her to mimic this speech pattern and led to her suspension.
- **Mark Zuckerberg** is a prime example of faulty AI which has failed to mimic human behaviour recently /s

Task 4 - Common sense logic

- Solution1: the bowl contains three fruits: 1 apple, 1 pear, and 1 lemon.
- Solution2: the bowl contains three fruits: 1 apple and 2 pears

Due to statement 1, there can only be two more other fruits than 1 apple in the bowl, otherwise it

would be possible to not take an single apple. There must be 1 apple in the bowl, and not more than 2 other fruits. Due to statement 2, there must be at least 1 pear in the bowl, and an arbitrary amount bigger than 0 of lemons.

Task 5 The Cheese Shop

See CheeseShop_KevinSchneider_LukasWeil.py