Artificial Intelligence_LAB01:

1. Intelligence

1a. a dog can depict if something is or is not safe to eat
a dog can smell different things up to 12 miles (20KM)
a dog is able to understand humans up to a certian level
a dog has the ability to learn new things
a dog has the ability to converse with other "creatures" besides humans like other dogs for an example

1b. A Human has the ability to train his/her body to a certain perfomance level
A Human has the ability to build things
A Human is more creative than a dog
A Human has better understanding of emotions
A Human can use a functional or multiple functional languages

1c. An Organization can share each others knowledge to function more effective than a sole Human bein g
An Organization can work faster than a sole Human being
An Organization can understand things faster due to each member helping each other
An Organization is even more creative than a single Human being since multiple creative people could w ork together
An Organization can protect each member better as they are multiple and not one

Being more effecitve, faster and better at certain things is the definition of higher intelligence.

2. Chatbots

In the Year 2019 a Man named Steve Worswick won the Loebner Prize with an AI called Kuki. Her (the AI -Bot) Intelligence includes the ability to reason with specific objects. For example if someone asks "Can a human beat a mouse in a fight?" Kuki looks up properties for "mouse". Finds the value of "how_strong" is set to "weak " and replies "yes", as a mouse is beatable. That is also part of the reason for it beating the o ther AI's as it tries to answer questions that a bot wouldn't be able to answer easily with reasearch, and n ot just a simple unstatisfying answer like "Ich bin mir nicht sicher.", which the Eliza Chatbot (1966) gives w hen asked "Can a human beat a mouse in a fight?". A possible reason for it being defunct since 2020 is th e amount of Criticism that the Loebner Prize recieved. It has been said that Competition entrants did not a im at understanding or intelligence but resort to ELIZA style tricks. The time of questioning was also mere 2.5min, which permitted only a few questions. Another reason could be that Loebner died and thus the pri ze was discontinued, there needs to be someone who's able to take the organizational lead. Regarding th e difference between the Chatbots one thing i noticed is that ChatGPT gives more statisfiying answers tha n Mitsuku and ELIZA.

quelle: https://en.wikipedia.org/wiki/Loebner_Prize
quelle: https://www.kuki.ai/
quelle: ChatGPT

3. Chinese Room Argument

The Chinese Room Argument seeks to challenge a particular perspective on the role of computation in hu man cognition. To grasp the argument's essence, it's essential to differentiate between the Strong and W eak versions of Artificial Intelligence. The idea is that a man sitting in a room with specific instructions bas ed on the Chinese language could reply to someone sliding Chinese symbols under the door would be abl e to reply with the right Chinese symbols by the help of the instructions. This would mean that the man hi mself does not understand Chinese however he can simulate that he understands it or simulate that he kn ows the required characters to give a correct response. To be called a Strong AI, Artificial Intelligence sho

uld have mastered the following points: Reasoning, Making decisions in the face of uncertainty, Planning, Learning and Natural Language communication. Weak AI on the other hand is limited to individual applica tion fields - no universal intelligence. The main points of the Chinese Room Arguement revolve around th e fact that according to strong AI any system that implements the right computer programm has the cognit ion in exactly the same literal sense that humans have understanding, thought, memory, etc. Weak AI clai ms only that the system/computer is a useful tool and not capable of having cognition in the same sense t hat humans have. In short - Strong AI, the correct simulation really is a mind. Weak AI, the correct simulat ion is a model of the mind. Important to mention is if the computer passes the turing test, it still doesn't me an that the computer is smart or has a mind on it's own.

quelle: https://plato.stanford.edu/entries/chinese-room/
quelle: http://www.scholarpedia.org/article/Chinese_room_argument#A_brief_history_of_the_argument

4. AI State-of-the-Art

(a) Yes, AI is able to play a decent game of Table Tennis if it has been given enough time to learn. I found a video on AI that learned how to play table tennis using a Machine Learning algorithm

(b) No, AI would not be able to drive a Car in the Centre of Egypt, Cairo as there would be many different challenges to face that AI has not been programmed for. The roads in Egypt are too unpredictable.
One way to fix this issue could be to give the AI specific data of the Streets in Cairo over a certain perio d of time. Maybe a time where there is a lot of traffic and when there is less, however the AI would require a lot of data for it to be close to successfull.

(c) If the decent game at a competitive level is held with another Human the AI would could struggle but it wouldn't be impossible. I read in an Article that AI has outperformed humans that have played against other AI's

(d) I don't think an AI would be able to write an intentionally funny story. It could search the internet to find things that are considered funny, but that depends on whether it knows funny stories that it can draw on or has been trained with. The AI as of now does not have a sense of humor like a human does, that's where the issue lies.

(e) Yes this is possible, there is a viral AI that people can use to translate their videos in real time.

(f) I believe this could be possible, however not without proper Supervision of a Surgeon as some task ma y be too difficult to deal with. There could be unexpected problems with which the AI wouldn't know how to deal with.

quelle: https://youtu.be/qAItxreKMOI?si=KZ9zlsklLJ68Dmle
quelle: https://fortune.com/2022/03/30/artificial-intelligence-beats-humans-card-game-bridge/

5. AI Competitions

The TREC information retrieval event for an example has helped the state of AI with adoption of machine learning. TREC has played a role in promoting and adoption of machine learning and deep learning techniques for information retrieval. A way for them to hurt the other fields is becuase of research and fun ding. TREC and other similar events require resources, including time and funding. Research Teams that choose to focus on these types of events which then results in them having less attention for other fields i n AI and machine learning.