Problem Set 1 Artificial Intelligence

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Introduction, history

A Critic on Turing's Analysis of Contrary Views

Still Valid

(1) The Theoloigcal Objection

Lol, this is definitely an argument that is still being made today. Growing up in northern Wisconsin, I experienced a healthy dosage of Theology versus Scientific discussions in school and my community. His view on it is a little arogant and mean though :(.

(3) The Mathematical objection

Here, Turing really stresses the point that people agree "no such limitations apply to the human intellect". The notion that there is no limit to a human beings thought processes come from our own classificatoin, and a feeling of superiority over machines. I agree with Turing, thinking this is a little fishy thinking.

New Objections

(7) Argument from Continuity in the Nervous System

Here Turing states that hte nervous system is certainly not a discrete-state machine. I think with new developments in neural science, the black box understanding of nerves and synpapse has become much more clear since 1950. His initial premise may not hold true, as people have an understanding that sugguests aspects of nervous synapse (references nerve through an arm, not int he brain) do behave like a discrete-state machine.

Turing Test Done now.

I think a computer has a much higher chance to pass a five minute Turing test today than it did in 1950. The things that really differentiate the two computers is the capability to store memory, index that memory, and learn inferences from the data. Now a machine can have access to petabytes of information. Coupled with the addition of lightning fast cpus, a machine can rapidly index the library of inforamation. Then creating complex decision making neural networks to present a phrase modeling that of a humans. The difficulty would fall onto the observer to differentente a machine from a person.

A Survey of State of the Art NLP

In my apartment, I am a daily user of my google home. I love trying to ask it new questions and get it to think. The problem is that it is not trying to have a conversation or insight discussion, but instead merely satisfy my verbal query. Additionally, sometimes it will suggest watching a google podcast, something that reminds me the software is used for capitalistic gains.

The strength of the system is in the accuracy and speed of the responses it gives. When I ask what the weather is, it will give me a detailed, relavent reponse. When I ask to play as ong, it will 9 times out of 10 find the exact song I am looking for. It does this things in a 1-3 second window, which is very comparable to that when a human being is thinking.

I think to pass the turing test, the google home must be more engaging. Be a little more human and interrupt someone when you hear them saying the wrong task. Or when I say something you don't understand, don't try and make it work, but instead ask me to say that again.

AI Grand Challenge Topics

Reverse Engineer the Brain In order to understand something, you must first understand how to create it.

The high value result from this task is the ability to simulate brain activities. This can lead us to creating agents that have years and years of human being experience. Even more greatly, the ability to have a model observe multiple (10^10^10) lifetimes of human beings could create an incredible leader.

This opens the door to mapping human beings into computers, as we may be able to decode brains of living peoples into our new re-

engineered models. People may be able to immortalize themselves in our lifetime.

There are a lot of micro challenges that result for researches in the pursuit of this grand challenge. Improvements in biological sceinces, computational sciences, and electrical engineering sciences need to work in tandem to complete this task.