TURING TEST

IFT 598 – AI IN CYBER SECURITY

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Discussion:

Hello Everyone,

I wanted to share my opinions on the **Turing test** during this debate. Alan Turing, a well-known computer scientist, asked the topic **"Can computers think?"** in his article **Computing Machinery and Intelligence** in 1950. He projected that by the year 2000, computers will be able to converse with humans so well that they would be indistinguishable from humans 30% of the time. He provided criteria that would eventually become the gold standard for artificial intelligence research in the years to come in the same study. The Turing Test was named after his method of determining whether or not robots are indistinguishable from humans. Many scientists have attempted to construct artificial intelligence systems that can pass the Turing Test, but none have been generally accepted.

The Turing Test is a deceptively easy way of testing if a machine is capable of displaying human intelligence: A machine has exhibited human intelligence if it can converse with a person without being identified as a machine. Important points of the Turing test: The Turing Test assesses a test subject's intellect to evaluate whether a machine can display intelligence. A computer program can think if its replies can deceive a human into thinking it, too, is human, according to the test. Although not everyone recognizes the Turing Test's validity, passing it remains a significant barrier for artificial intelligence engineers. .

There are variants to the Turing test, as well as changes to the approach of questioning in several AI exams. The Turing test has various drawbacks, including the necessity for a controlled setting, the lack of a specific definition of intelligence, and the need to adapt to changing technological breakthroughs.

The Turing Test has been questioned throughout the years, particularly because the nature of the questions has traditionally had to be constrained in order for a machine to display human-like intelligence. For many years, a computer could only achieve high scores if the questions were phrased in such a way that they had "Yes" or "No" responses or were limited to a certain subject of expertise. When the inquiries were open-ended and needed conversational responses, the computer program was less likely to effectively trick the questioner. Furthermore, software like ELIZA may pass the Turing Test by manipulating symbols it doesn't fully grasp. According to John Searle, this does not establish intelligence equivalent to humans.

Turing test in current trend:

In 2018, Google Duplex successfully scheduled a hairdresser appointment over the phone in front of an audience of 7,000 people. The receptionist had no idea they weren't speaking with a real person. Some belief this to be a modern-day Turing Exam pass, even though it does not follow the real structure of the test as created by Alan Turing.

Some believe that GPT-3, an OpenAI natural language processing model, has the highest chance of passing the exam in its actual form of any technology available today. Despite its excellent text-generation capabilities, many have criticized the machine since it may be misled into responding to nonsensical questions and hence would suffer under Turing Test circumstances.

Conclusion:

Despite the substantial dispute over the Turing Test's current relevance and the legitimacy of contests based on it, the test remains a conceptual starting point for debating and exploring AI. As AI improves and we better understand and map how the human brain operates, the Turing Test remains basic for defining intelligence and serves as a baseline for the discussion about what we should anticipate from technologies in order for them to be termed thinking machines.

References:

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