Critique of the Turing AI

# The Authors proposition

The author contemplates whether it would ever be possible for a machine to think. If so… How can we measure/estimate what thinking is, what could be the possible parameters to evaluate such a machine, the test that could be conducted on it for it to qualify as thinking has been expounded by Turing.

***“Can machines think?”***

This question rather makes us ambiguous on the context of what “thinking” means. Hence, Turing proposes a system/method where one can evaluate whether the machine thinks. The question can be reiterated or modified as follows:

***“Can a human be deceived by a machine as to think that he(machine) is a human?”***

The author argues that this question draws a sharp line between the physical and intellectual capacities of man. Turing foresees that it could be possible to recreate all the physical aspects of a being in the future, but that clearly does not define the thinking process or ability. Hence, it is important to define a system where we can evaluate if the machine can think.

Hence, he proposes a fool proof setup to evaluate whether the machine can outsmart the human. The setup has been clearly stated in the paper and hence I will not go about explaining it but rather criticize on the paradigms considered for the proposed test.

# Parameters to be considered

Can a biologically(artificially) grown being also be considered as a thinking machine? Absolutely not. The proposition here is limited to the Digital Computers which have the capability to store and execute massive data and operations and are programmable. Complex tasks can be performed through finite state machines with such capability.

# Why this is the right question…

Any complex instance that we have encountered and haven’t yet been able to solve we have attributed this to the God Almighty and fate etc. But time and again, we have been able to disapprove this proposition. Hence, theological thought of whether machines can think must be ignored.

What if machines dominate human beings? We will loose our superiority!! But this proposition sounds irrelevant even now…

The idea of consciousness where one has the ability to observe and be aware of oneself can rather be omitted from the point of discussion.

The emotions expressed by humans to feel for objects and people would be a disability of the machine and in fact isn’t important with our perspective of whether a machine can think.

Machines must not be thought of as error free. They might tend to provide some erroneous conclusions occasionally.

The machine can also become a subject of its own with the ability to reprogram itself based on it’s behavior. A behavior, Turing says is an action of sort and can be replicated given a large storage capacity to store all sorts of behaviors. It is however true that we all are guided by certain unmentioned principles and so would it be for the machines, i.e., could be predictable, although not necessarily.

Lastly, the supernatural abilities must not be considered in terms of the test and if so held, must be restricted by usage.

# Machines that can learn

Turing proposes a mechanism by which the machines can learn. He proposes that the machines must be punished if they take the wrong action and rewarded if done the right one. This mechanism can be used to build a set of behaviors for the machine. This method can be conceived as the ability to adapt and evolve i.e., the survival of the fittest. This way machines can be made to learn and perform many complex tasks as has been showcased in the current time as Reinforcement Learning which adopts the same principle.