

5/10/5

Katherine Abellan

October 5, 2020

In 'Introduction for Artificial intelligence', Dr. Visser discusses the importance and relevance of artificial intelligence in our society and the autonomy of these machines. Dr. Visser talks about his experience with his AI-driven humanoid. The purpose of this robot is to play soccer and the discussion of the class was to decide whether the robot was intelligent or not. In other words, was the robot making his own decisions of when to turn, when to run, and when to kick, or were the motions of the robot simply a product of programming. Also, if it possible for machines to be completely autonomous.

The development of artificial intelligence is derived from many different fields of science. Philosophy contributes to the logic of AI, math contributes algorithms, psychology contributes to behavior and cognitive psychology, and so on. The history of AI began in 1940 when people started to question how the mathematical model of a brain neuron would work. From there people got interested in general problem-solvers (GPS). They wanted to tackle the problems of the world by symbol manipulation.

Dr. Visser describes artificial intelligence as a continuous loop of perception, thinking, and then acting. The most agreed-upon definition of artificial intelligence is the study of computations that make it possible to perceive, reason, and act. AI is important in hospitals and doctor's offices. A relevant AI in hospitals is imaging machines. These imaging machines are better at determining if someone were to have skin cancer than a regular doctor is. If this imaging machine is better than a doctor at diagnosing someone it raises the question of whether doctors

will be replaced by machines in the near future. However, Dr. Visser explained that imaging machines do more to support doctors than to replace them.

Dr. Visser then goes on to talk about how computers can act like humans. One example is the Turing test which was designed to provide the definition of intelligence by stating that if a computer passes the Turing test then it is intelligent. There is also a type of Turing test called the 'Total Turing Test' which includes visual perception.

In regards to autonomy in artificial intelligence, Dr. Visser explains that agents are expected to be more autonomous than computers. Agents are expected to perceive the environment through sensors and act using the best possible outcome. artificial intelligence and rational agents have better behavioral approaches because rationality is defined.

This relates to Cognitive Science in the sense that we are trying to figure out how a machine is capable of thinking, and this also raises the question of how we as humans think. There is a desire to make a machine think like a human, in other words, be autonomous, but in order to do this, we need to explicitly know how a human brain works and how humans think and process information. There are three ways to find out how humans think. The first is self-observation while thinking, the second is psychological experiments, and the third is brain imaging .

