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**Module:** IN5103 - Risk, Ethics, Governance and AI

**Assignment:** Week 1: Understanding the Narrative of AI: Contextualising AI as a historical Narrative/timeline

**Supporting Textual Analysis**

Whilst conducting this assignment, it struck me that I previously had little appreciation for the history of AI. The field in a formal sense is less than 70 years old but in this short period, it is not without its fair share of successes, failures, and even winters. Although, the term ‘Artificial Intelligence’ was coined in 1956, choosing the exact starting point for this great story is not a trivial task.

Perhaps, one could argue that the history of AI began in antiquity. McCorduck et al. (1977) explain that many stories of artificial intelligence appear in Greek mythology, whereby the artificial being would carry out tasks that the gods themselves found burdensome. By the same token, one could attribute considerable credit to modern fiction in the early 20th century, Mary Shelley's Frankenstein or Karel Čapek's R.U.R. (Rossum's Universal Robots) being prime examples. However, the timeline presented here defines the inception of AI with the Turing Test, which I would consider to be the earliest substantial work in the field.

Referred to as the imitation game, Turing outlines a method for determining whether a computer is capable of thinking like a human being (Turing 1950). This method would later become known as the Turing test and would be widely considered a founding paper of the field of AI. The second milestone described in this timeline introduces an additional 4 founding fathers of AI (Newell, Simon, McCarthy, and Minsky) as they all attended the ‘Dartmouth Summer Research Project on Artificial Intelligence’. In the corresponding proposal, McCarthy directs the reader "to proceed on the basis of the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it" (McCarthy et al. 1956).

This conference gave birth to the field of AI and along with Turing’s work, gave succeeding generations of scientists their first sense of the potential for AI to benefit society profoundly. As I reflect on this history, it is becoming clear that each milestone does not stand independent but is deeply connected to the other milestones in this timeline and beyond. Of course, Turing and Dartmouth may be thought of as a foundation, but it goes much deeper.

Eliza paved the way for the modern NLP AI we see today, including Siri. Shakey worked with sensors and cameras which would have great influence in the explosion in IoT and computer vision technologies. Turing (1950) set a challenge to AI researchers to pass his ‘Imitation game’ which was eventually achieved in 2014 by Eugene (albeit, somewhat controversially). Moreover, Turing (1950) and Shannon (1950) describe the ability of a machine to play chess and, in 1997 Deep Blue defeated world chess champion Gary Kasparov, and in 2017 AlphaGo defeated the world Go champion Ke Jie.

The timeline is ended by introducing the current concerns over the often-unintended consequences of AI (biased AI) and highlights the push to establish standardised ethical frameworks. The example given is the EU guidelines that AI systems should meet to be deemed trustworthy (European Commission, 2019). Finally, a look at the future is presented as a vast unknown. The history of AI has been so unpredictable in the past, that it’s a reasonable assumption that this trend will continue.

Conducting this assignment has provided a great insight into the history and meaning of AI in terms of absolute milestones and their deep interconnectedness, but also the philosophy of AI. The latter particularly interesting when considering the founding fathers original vision for the field and the more recent sub-field of ethical AI. This timeline represents a fascinating 70-year history, here’s to the next 70.

**Bibliography**

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