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Alan Turing Presentation Assignment

Abstract: Research an individual to learn something about their life and the scholarly contributions of the distinguished individual. In this case, mine will be on Alan Turing.

Alan Turing



“A computer would deserve to be called intelligent if it could deceive a human into believing that it was human“ by Alan Turing

Alan Turing was many things including an English mathematician, computer scientist, logician, cryptanalyst, philosopher, and theoretical biologist. His experiences as he went through and graduated from college furthered his understanding of computation, mathematics, and AI. Turing was accepted into King's College at Cambridge, in 1931 to study mathematics, where he then got to explore his own ideas and creations. Throughout his time at Cambridge he was

awarded many scholarships and prizes for excelling in his studies. He spent his time trying to answer mathematical and logical questions.

He invented the new machine by writing and publishing a paper called “*On Computable Numbers, with an application to the Entscheidungsproblem*,” where he introduced the new abstract machine, which he called “a-machine (automatic machine),” but is now referred to as the Turing machine. There was a slight hiccup in this publication when Alan refused to reference Alonzo Church’s paper in his first draft publication paper, in which he revised and was able to publish afterward in 1937. The most remarkable portion of this paper was that he was describing a modern day computer before they had the technology for them at that time. He was then accepted to and studied at Princeton University where he spent more time under Church’s wing.

After graduating from Princeton, he was contacted by the Government Code and Cypher School who asked him to help them in their work on breaking the German Enigma codes during WWII. He worked with a partner to develop the *Bombe*, another machine that would decode any message sent from an Enigma machine. The German version of these machines were harder to break, but the struggle and challenge was what Turing enjoyed. He may not have been directly involved with the breaking of these codes, but his ideas were worth more than he knew.

He was invited to the National Physical Laboratory where he was asked to design a computer. He did so, developing the Automatic Computing Engine (ACE), which was one of the first designs for a program computer. He was then invited to accept a position at University of Manchester where his old friend Newman resided and taught. He then began to write code for programming computers. His ideas had grown quite a bit, to where he proposed the Turing Test

in another published paper in 1950. The Turing Test is a test people still use today to test whether a computer can be intelligent; he studied the problems that were at the heart of AI.

The most salient and significant contributions made to formal systems and work in the fields of cognitive or computer science were the ACE, the Turing Machine, the Turing Test, Bombe, Enigma, and more as discussed above. These contributions have shaped the computer and cognitive science world because of Turing's ideas and conceptions.

References

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