

Alan Turing: Computer Scientist

Alan Turing's work was critical to the Allied victory in World War II.

- ❖ Full name: Alan Mathison Turing
- ❖ Born in: Maida Vale, London, UK on June 23, 1912



Significant Contributions

- ❖ In the fields of computer science, mathematics, logic, cryptography, and theoretical biology.
- ❖ His concept of the Universal Machine, now called a Turing Machine, is one of the most fundamental objects of study in the theory of computation.
- ❖ He also came up with the Turing Test, which says that a computer should be considered to be intelligent if humans cannot tell that it is not human. This has been the basis of much research, and even the 2015 film, *Ex Machina*.

Turing and his team developed a fast code-breaking device that provided Allied forces with vital information during World War II. He has been credited with “saving the world” for this work.

In 1948, he began working at the University of Manchester in the Mathematics Department. Here, he became one of the first to tackle the idea of artificial intelligence. He designed a computer program to play chess before there were computers that could even run such a program. He also invented a technique called the “LU decomposition,” which is used on matrix equations. Following this, he contributed to theoretical biology, studying patterns and shapes present in living things.

Despite the fact that he was recognized as a hero in many parts of the world, the fact that he was homosexual caused him to be prosecuted for “gross indecency.” Because of this, he was no longer allowed to perform his cryptographic work. As part of his sentence, he was given hormones which rendered him impotent, and greatly changed his body in other ways. Shortly after this he died, on June 7, 1954. Though his death was ruled a suicide, there are alternate theories.