Where and when X lived: E

What X’s specialty was: E

How X learned his specialty: MN (what got him interested in AI as opposed to math?)

Contributions to CS: E

Technical background: G

X’s personality: M (you give lots of biographical info, but very little about his personality except a love of math)

Tells an interesting story: G

Writing mechanics: G

E = Excellent

G = Good

MN = More Needed

M = Missing

In general, this paper relies too heavily on the Wikipedia article on him. See other comments below.

Overall mark: 75%

John McCarthy

John McCarthy was an influential computer scientist who is considered the founder of Artificial Intelligence (AI). McCarthy was born in Boston on September 4, 1927 to an Irish father and Lithuanian mother. During the Great Depression his family moved often until his father was able to get a job in Los Angeles California. McCarthy had a great interest in learning and specifically in mathematics while growing up. He graduated high school two years early and during that time he started teaching himself college level math. In 1944 he was accepted into Caltech and was able to skip the first two years of math there because of his previous studying. McCarthy was then later suspended from Caltech because he refused to attend the physical education classes. After he was suspended he went to serve the US army and once he finished his time in the army was allowed back into Caltech. He earned his B.S. in mathematics at Caltech in 1948 and then he received his Ph. D. in mathematics at Princeton University in 1951. In 1962 McCarthy became a professor at Stanford and remained there until he retired in 2000.

*How did he go from mathematics to AI? What got him interested in computing?*

In 1956 McCarthy organized the first international conference about the topic of AI. Later that year he won an MIT research fellowship. McCarthy helped create project MAC at MIT. At MIT he worked with Marvin Minsky on robotics using computations and common sense reasoning. His research focused on the steps it took to complete a task intelligently and how he could teach that to something else like a computer. McCarthy and his students were the first to create a computer program that convincingly played chess. Though the following years McCarthy continued to develop his chess program and even challenged a group of scientists from ITEP and a Chess Master David Levey. Unfortunately, he lost both matches.

John McCarthy is also the creator of the programming language Lisp. Lisp soon became the preferred language of Artificial Intelligence programmers and continues to be a popular choice today. Around 1959 McCarthy invented the “garbage method” to solve problems he was having in Lisp. Garbage Collection (GC) is a memory management tool that automatically retrieves computer memory of objects that are no longer being used within a program. This method saved programmers a great deal of time because they no longer had to retrieve data manually.

One of the big concepts McCarthy helped create was timesharing. Timesharing allows many users to use a computer or program by sharing the computers resources by multiprogramming/multitasking. This idea of timesharing has since been built upon and further developed leading to newer inventions and programs such as the internet and cloud computing. While McCarthy didn’t develop either of these himself his work on time sharing contributed to the basis of these ideas.

John McCarthy has won many awards for his achievements and contributions to the field of computer science. In 1971 he won the Turning Award which is regarded by many as the highest award and distinction in the field of computer science. Besides the Turning award he has won many other awards including Kyoto Prize (1988), National Medal of Science (USA, 1990) and Benjamin Franklin Award (2003) for his work in computer science.

Artificial Intelligence continues to be a growing field within computer science. McCarthy’s help and contributions towards the field were significant and helped it get started. Without McCarthy’s contributions it’s hard to tell how far along we’d be in the field of AI. Because of his works and contributions McCarthy is a great computer scientist who should be remembered.

Sources

<https://en.wikipedia.org/wiki/John_McCarthy_(computer_scientist)>

<http://www.independent.co.uk/news/obituaries/john-mccarthy-computer-scientist-known-as-the-father-of-ai-6255307.html>

<http://www.computerhistory.org/fellowawards/hall/bios/John,McCarthy/>

http://amturing.acm.org/award\_winners/mccarthy\_0239596.cfm