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CSE 1105-001

26 September 2018

John Vincent Atanasoff

John Vincent Atanasoff was the inventor of the first electronic digital computer which revolutionized society as we know it today. He was a mathematical physicist and a businessman and his invention was the birth to the field of electronic computing which encompasses almost every aspect of our everyday life. Whether it be turning on the tv, our car, our laptops, elevators and even life saving technology in the medical field. Atanasoff was a true pioneer in all these accomplishments thanks to his ABC (Atanasoff Berry Computer).

Atanasoff was born on 4 October 1903 in Hamilton New York to his father John Atanasoff and his mother Iva Lucena Purdy. When he was at an early age, he showed an interest in mathematics. One day, his father bought a Dietzgen slide rule and became interested in it and how it worked. He read the instructions and his curiosity lead to him exploring mathematics even further. He picked up a college algebra textbook that belonged to his dad and began studying it with the help of his mother. Later down the road, his family moved to Old Chicora Florida. In High School, he had straight A's and was a good student. This was also the case during his undergraduate career in college. He went to the University of Florida in 1921 and got his bachelor's in electrical engineering in 1925. Finally, he got his doctorate at the University of Wisconsin in theoretical physics. After that, he want back to Iowa State, where he got his master's, and became an assistant professor there. During this time, he was envisioning a digital computer that was far more accurate and reliable than an analog computer that were used during his time.

This digital computer was envisioned with these principles: electric, base-two numbers, and direct logical action and not by enumeration. He was granted $650 by the university to work on his project in March 1939. Having the project on the way, he had hired a bright electrical engineer named Clifford E. Berry. Once built, they named it the Atanasoff-Berry Computer (ABC) and it became the first electrical digital computing device. It was designed to solve systems of equations capable of up to 29 linear equations. It was a truly remarkable invention for its time because it used binary digits, all calculations were done using electronics instead of mechanical switches and it used the Von Neumann architecture where memory and calculations were separate. It weighed around 320 kg and had 1.6 km of wire. The computer, however, was not a general-purpose computer as it could not be reprogrammed. Its program was built in physically and not in the memory. The memory was only for receiving data for the computations.

Later in Atanasoff's life, he left Iowa State to work for a defense-related position for the Naval ordnance laboratory in Washington D.C. He became the chief of the Acoustic Division and later down the road he was involved in an atomic bomb test in the pacific. In 1949, he had become the chief scientist of the Army field forces. Throughout the years following WWII, he was involved in some legal disputes against a machine called the ENIAC. Atanasoff showed off his ABC computer to Dr. Mauchly which inspired Mauchly into create his own version of ABC. Mauchly began applying for many patents involving the ENIAC which brought Atanasoff to fight in court. He eventually won the case against the ENIAC and was formally recognized by the courts as the inventor of the first electrical computer. In 1995, he had died of a stroke aged 91.

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