

Ada Lovelace

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Life

- Ada Lovelace was born as Augusta Ada Byron. She was born in London, England on December 10, 1815.
- She married William King who later became the Earl of Lovelace, making her the Countess of Lovelace. This is where the name Ada Lovelace comes from.
- Her father was a famous poet named Lord George Gordon Byron and her mother, Lady Anne Isabella Milbanke Byron, had a passion for mathematics.
- Ada's parents separated shortly after she was born. She never knew her father.
- Her mother was determined to make sure Ada was nothing like her father. She insisted Ada learn mathematics and science. This wasn't common for girls at this time but Ada came from a wealthy family. From an early age it was clear Ada was gifted.



Life (cont.)

- Ada had many tutors, one of which was Mary Somerville, a mathematician.
- Somerville introduced Ada to Charles Babbage, the Lucasian Professor of Mathematics at the University of Cambridge.
- Charles became a mentor to Ada and a life long friend.
- Charles was working on something her called the Analytical Machine. Ada got a chance to see it before it was finished and was fascinated by it. She was determined to learn more.
- This is how she became involved in the field of computer science.
- Ada Lovelace had health problems her whole life and died on November 27, 1852 at the age of 37.

Contributions

- Ada became familiar with Babbage's Analytical machine, and helped with it and anything Babbage needed
- Was asked to translate an article on Babbage's Analytical machine that was written by Italian engineer Luigi Federico Menabrea for a swiss journal
 - In translation, Ada added her own thoughts about the machine
 - Notes ended up being three times as long as the original article
 - Notes were published under the pseudonym "A.A.L."

Contributions (cont.)

- In notes:
 - A method for calculating a sequence of Bernoulli numbers with the machine
 - Described how codes could be created for the device to handle letters and symbols along with numbers
 - Theorized a method for the engine to repeat a series of instructions, otherwise known as looping.
- In her notes, she anticipated the capabilities of modern computers before they were realized

Legacy

- Due to her method involving Bernoulli numbers, Ada is considered to have created the computer algorithm, and subsequently, is the first computer programmer
- The computer language Ada, created by the US Department of Defense, was named in her honor
- The British Computer Society has awarded a medal in her name

Bibliography

- <http://www.fourmilab.ch/babbage/sketch.html>
- <http://www.biography.com/people/ada-lovelace-20825323#babbage-and-the-analytical-engine>
- <https://www.newscientist.com/blogs/shortsharpscience/2009/03/ada-lovelace-day.html>