



St Mary Magdalene

ADA LOVELACE

Ada Lovelace (1815-1852)

A souvenir guide to the pioneer of computer software



St Mary Magdalene
CHURCH, HUCKNALL



Charles Babbage,
by Samuel Laurence.

Ada Lovelace, the only legitimate daughter of the poet Lord Byron, is widely credited with having written the first computer programme. She was the last to be interred in the family vault at St. Mary Magdalene Church.

Ada's parents separated shortly after she was born and she never knew her father. Her mother, Annabella Millbanke, sought to prevent Ada from developing the Byron family 'madness' by steering Ada away from a poetic life towards more logical and scientific pursuits. Ada discovered a natural flare for mathematics, but remained fascinated by her father, describing herself as a '*poetic scientist*'.

Ada Lovelace and Computing

Ada's mathematical ability impressed Charles Babbage, the designer of the first mechanical computer, the 'Analytical Engine'. He asked her to work on some mathematical problems which could be run through the engine. The algorithm she produced to calculate a number sequence called 'Bernoulli numbers' is widely considered to be the first computer programme.

She went on to consider a computer's potential abilities beyond mere mathematical calculation. '*The engine might compose elaborate and scientific pieces of music of any degree of complexity or extent*'. She was the first to suggest that a machine might mimic human creativity.



Detail of the calculating wheels, part of Charles Babbage's analytical engine.

A.I. – The Turing Test and ‘Lady Lovelace’s Objection’

In 1950 Alan Turing, pioneer of the electronic digital computer proposed a test to determine whether a ‘machine could think’. The Turing Test of Artificial Intelligence (A.I.) uses the now famous Imitation Game as a way of determining whether a computer has A.I.

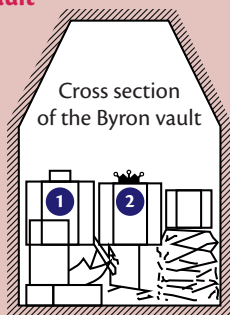
But Turing also suggests that nine philosophical objections must be overcome for A.I. to be accepted as truly existing; objection six is ‘Lady Lovelace’s Objection’.

Ada thought that a machine could be programmed to mimic human creativity but could not actually think for itself, it had *‘no pretensions whatever to originate anything’*. It could only produce outcomes already predicted by the programmer; it was incapable of an original ‘thought’. Turing reduced this objection to - *‘(a computer) can never take us by surprise.’*

Turing overcame the objection by saying that Ada was limited by the technology of her time. He thought that a digital computer, given enough power, speed and memory, could process programming so complex and with so many variables that an unexpected result might be obtained; mimicking an original thought!

Ada Lovelace’s interment in the Byron Vault

In spite of her mother’s precautions, Ada was a true Byron; she loved gambling and was rumoured to enjoy close relationships with men other than her husband, the Earl of Lovelace. Like her father, she was destined to die aged 36. In 1852 she developed terminal uterine cancer and in her final months her mother persuaded Ada to repent of her former conduct. On the 30th August she confessed something unknown to her husband. Whatever it was caused him to end all connection with her. On the 25th November she died and at her request, she was laid to rest next to her father in the Byron vault.



- 1 The poet’s coffin
- 2 Ada Lovelace’s coffin

The Imitation Game



‘A’ can’t see ‘B’ and ‘C’. ‘A’ doesn’t know which one is the computer. ‘A’ passes notes with questions on to ‘B’ and ‘C’. Depending on the answers received, ‘A’ guesses which one is human. If ‘B’ can convince ‘A’ that it is a human, it has demonstrated intelligence indistinguishable from a human, and therefore possesses A.I.

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There is more to discover about St Mary Magdalene Church and its people.

