Ada Lovelace

History is filled with countless innovators, dreamers, and some people who were ahead of their time. None were more so ahead of their time than Ada Augusta Byron, the Countess of Lovelace. A brilliant mathematician who is considered one of the first programmers for her ideas on the Analytical Engine of Charles Babbage, Ada Lovelace is one of the most famous innovators of her age.

Born in 1815, Ada Lovelace was born in England but was shortly after taken away by her mother, Annabella Milbanke, to Annabella's parents after learning of Lord Byron's infidelity. Through Ada's childhood, she had some of the outlandishness that her father had that her mother decided to temper by hiring people to tutor her in mathematics. This caused Ada to love mathematics and to see the beauty in numbers. She famously coined the phrase, "Poetical Science", due to seeing the beauty of numbers. As she grew older, she eventually moved back to London where, at the time, innovators and dreamers have congregated to spread ideas amongst themselves. In London, she attended one of Charles Babbage's parties where he demonstrated a prototype of his Difference Engine. The Difference Engine was supposed to be a machine that could create nautical tables, which were error prone and different depending on which book you used, without error. Ada Lovelace saw the beauty of this machine and thought it could change the future. She chased Charles Babbage's ideas and had help from her tutor, Mary Somerville, in meeting him. They didn't get off well but that did not stop Ada from chasing his ideas. She went so far as to translate Luigi Menebrea's notes on Charles Babbage's Analytical Engine from the lectures that Charles Babbage had in Italy from Italian to English. These translations on these notes are what truly made her famous. Not only did she translate these notes, she added on her own ideas for the Analytical Engine. The Analytical Engine was a machine that could do what the difference engine could do and more. But when Charles Babbage thought of the machine, he was only thinking in calculations it could do. In Ada Lovelace's notes, she explained how the Analytical Engine could be made into a general-purpose machine that could be used for not just calculations but for things such as the creation of music among things. Charles Babbage thought to use the machine as he had with the

Difference Engine where it was preprogrammed and could only do a set task. Ada Lovelace thought that we could use punch cards to program the machine to do new tasks, an idea later used for voting machines and early computers. Ada Lovelace, also in these notes, created what is thought to be the first program. In these notes, she wrote how to compute Bernoulli numbers using the Analytical Machine. This note is what has made people think that she is the first programmer. Even after so long, Ada's impact is still felt on the computing industry. She had her own programming language called "Ada" named after her by the Department of Defense. With her story and recognition by many as the first programmer, she also has become an idol for many female programmers and what many of them aspire to be. [2]

For our project, we wanted to do a tableau vivant of this portrait of Ada. This portrait of Ada was created in 1836 by Margaret Sarah Carpenter. It is an oil-based painting that is currently held by the Government Art Collection in London, England. The size of the portrait is 216 cm tall and 137 cm wide. [1]

To recreate this look, we had to gather the items required to make our team member look like Ada Lovelace. For the dress, we decided that sewing would be the best option since it would have been hard to find something even close to it. We went to the closest fabric store and got six yards of white fabric with white sequins on it. We used the white fabric material as base to create the white gown that Ada wears in the portrait. To create

the puffy look of the dress, we added frills to the dress. While the frills of the dress added to the puffy look, we added a tutu underneath the dress to give it an even more puffy look to it. For the next part, we needed to create a red sash that would be almost a half dress. For this, we created a belt with a thin scarf and wrapped the back part of the skirt with another red scarf to give the appearance that it has in the portrait. After acquiring all the necessary pieces to recreate the portrait, we began to dress our model for the photo. We had our model first put on the dress that was created. We wrapped the red scarf around her waist to give the illusion of sash that Ada wears. We tucked in the other red scarf on the backside of the sash which only showed a little peak of the red fro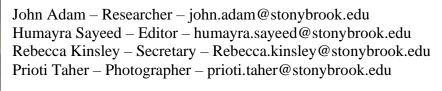m the sides of the white dress. A problem we ran into was the tiara that Ada wears. We could not find it in any store and the ones we had did not match well. As a solution to this issue, we had our model tied her hair in a bun and we wrapped a gold lace around her head and pinned it down to give the appearance of a tiara. While the creation and gathering of material for the portrait took a couple hours, getting our model ready and taking the photo took less than 30 minutes. We had our model stand in front of the green screen and with a little direction from us, we were able to recreate the pose that Ada does in the portrait. We were able to take some great photos which were very close to how Ada looked in her portrait. After selecting the best photo, we use Adobe Photoshop to crop her out of the original photo and place her into the scenery of Ada's portrait. Placing her into the scenery of the portrait was not enough though to give that feel that she meant to be in the portrait. In order to give the look and feel that she belonged in the portrait, our editor blended the photo of our model into the portrait using the brush tool and darkening the background.

This was our final product for the portrait. Our model was truly able to bring out the emotion that Ada had in the portrait. We were able to place her into the portrait and give the feel that she belongs in it.

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https://docs.google.com/presentation/d/1LaTsPJjOgkmfZ-d_WGLR1-BSS_KJWoX9cdvbMTiKsUg/edit?usp=sharing

Work Cited

[1] "(Augusta) Ada King, Countess of Lovelace (1815-1852) Mathematician; Daughter of Lord Byron." *Government Art Collection*, https://artcollection.culture.gov.uk/artwork/2172

[2] Isaacson, Walter. The Innovators. Simon & Schuster, 2014.