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Explore Task

2a.

The computing innovation I chose to study is Snapchat, a social media app. The purpose of Snapchat is to send photos, messages, and videos to your friends that disappear after a set amount of time. It allows for quick communication in a fun and simple way, and lets you stay in touch with your friends activities and location, should they choose to share it with you. My artifact shows how Snapchat is used to send quick messages, and it shows the added benefits such as seeing the location of your friends, and certain pictures or videos called stories that friends share with all the people added on their snapchat.

2b.

In order to form my artifact, I used the screen recording tool on my Iphone 6S to show Snapchat's function and purpose as a popular app for many young adults and teenagers. I then added music to the screen recording using iMovie, an app on the MacBook laptop that allows you to edit and film your own videos and films. I also used iMovie to add a voiceover where I explain the app's function. These editing and recording tactics allow me to share how I use Snapchat in my daily life.

2c.

One beneficial effect of Snapchat is that it allows people from all over the world stay in touch with each other and contact with the use of wifi or data. One does not need to pay for a cellular service internationally to speak with people across the globe. This is very helpful as one does not need to live in the same country in order to communicate internationally without fees.
One harmful effect of this app is that the option for a photo to disappear within a time frame of less than ten seconds leads people to believe that it is safe to send certain private photos to others. Some of these private photos contain drugs, nudity, and other illegal behavior. Snapchat can be used as the place where people share their illegal behavior with friends, ultimately promoting illegal activity in society, a huge negative effect of the app.

2d.

Snapchat uses Bootstrap and Javascript to develop its structure. Along with this, other languages that contribute to the foundation code of the app include Python, Objective-C (iOS), Cocoa Touch and PHP. Snapchat uses NoSQL for handling mass amounts of structured data. It also uses Google Analytics to analyze the app's usage and to collect the data from marketing efforts. (Veeraeswari).

A huge part of Snapchat's success is the facial filters that it offers on photos and videos. When Snapchat receives an input image frame, it looks for the x, y, width, and height coordinates of the face shown. Image patches sizing at 64 x 128 pixels loop over the face with a constant step size. The Viola-Jones algorithm can tell if the the patches display a face by computing the Histogram of Oriented Gradients and sending it to the Support Vector Machine classifier for detection. Then, a non-maxima suppression operation will stack rectangles onto the face to set a position for the filter to follow. (Le).

Many speculate the privacy of this app considering it holds a large amount of data about the user. Snapchat uses HTTPS/TLS protocols to secure communications. For encryption, the app uses custom and third party modules. Snapchat CBC encrypts all media before caching it. In 2014, Gibson Security released Snapchat's private API. From this, 4.6 million user's phone numbers were exposed. The reason for this is because Snapchat hardcoded the encryption key used by every account. With the hardcoded key, third party applications offered features not supported by Snapchat, such as decrypting Snapchat images. (Dawson). This causes many to worry about Snapchat's data privacy.

2e.

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