

Explore — Impact of Computing Innovations

Computational Artifact

2a. Provide information on your computing innovation and computational artifact.

Name the computing innovation that is represented by your computational artifact.

Describe the computing innovation intended purpose and function.

Describe how your computational artifact illustrates, represents or explains the computing innovation intended purpose, its function or its effect.

(Approximately 100 words)

The computing innovation that is represented by my computational artifact is apple iphone x. Iphone x is the latest version of iphone with lots of new features. The purpose and function of iphone x is to make a improved technology with new features like the face ID, entirely screen, improved display, etc. The computational artifact illustrates the new features of iphone x such as the face ID, animojis, organic light emitting diode (OLED) technology, wireless charging, water and dust resistance, improved camera, A11 bionic chip (1), (25% faster performance and 75% faster efficiency) and portrait mode selfies with lighting effect.

2b. Describe your development process, explicitly identifying the computing tools and techniques you used to create your artifact. Your description must be detailed enough so that a person unfamiliar with those tools and techniques will understand your process.

(Approximately 100 words)

The computing tool I used to create my artifact is google drawing. At first I searched on google for some pictures that could represent my topic. I got some pictures from google images that shows the new features of my computing innovation. I placed the images in google drawing, and I had to crop some of the images to make it more efficient. I created a circle shape artifact to make it more creative. I did this by first

placing the images in a circle then placing the pictures on top of the circles and gave it a blue color square background and finally converted it to a PDF.

2c. Explain at least one beneficial effect and at least one harmful effect the computing innovation has had, or has the potential to have, on society, economy, or culture.

(Approximately 250 words)

One of the beneficial effect of iphone x is it's display. The iphone x has a Organic Light Emitting Diodes (OLED) display technology. It is much thinner, much lighter, fast response time, better viewing angle, better color accuracy, image contrast accuracy, and higher brightness (4). One of the harmful effect of iphone x is it's glass on the back and stainless steel frame which is very easy to scratch and break and repairing it is really expensive (2) . The glass back allow the phone to have wireless charging. Smartphone device insurer SquareTrade,Inc. Said in a youtube video, that it is the most breakable, highest priced, and most expensive to repair iphone ever. And they give a breakability score of 90 high risk (3).

2d. Using specific details, describe: The data your innovation uses. How the innovation consumes (as input), produces (as output), and/or transforms data. At least one data storage concern, data privacy concern, or data security concern directly related to the computing innovation.

(Approximately 250 words)

The data that iphone x use is mobile data. Iphone x consumes as input as that there is touch screen, apps, games, etc and produces as output as that it uses audio, voice, power, etc. The iphone x's uses lots of data for the new feature, face ID. The data

from the infrared camera is sent to A11 chip to process, in which it compare the information about you on the phone(5). Apple has analyzed over a billion images for data about faces(5). One of the data storage concern is that the there is limited space to store files for example, pictures and videos have bigger size because of improved cameras, so it require more data to store. The face ID has some security concerns, someones can crack the Face ID with a composite mask of 3-D-printed plastic, silicone, makeup, and simple paper cutouts, which in combination trick an iPhone X into unlocking (6). So there is concern about the security of face ID on iphone x.

References

2e.

For each online source, include the permanent URL. Identify the author, title, source, the date you retrieved the source, and, if possible, the date the reference was written or posted.

For each print source, include the author, title of excerpt/article and magazine or book, page number(s), publisher, and date of publication.

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2. (<https://www.cnet.com/news/apple-iphone-x-drop-test/>), Vanessa Hand Orellana, "The iPhone X cracked on the first drop", November 4, 2017
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4. (http://www.displaymate.com/iPhoneX_ShootOut_1a.htm), Dr. Raymond M. Soneira President, DisplayMate Technologies Corporation, "iPhone X OLED Display Technology Shoot-Out" 2017
5. (<https://www.computerworld.com/article/3224569/apple-ios/iphone-x-and-face-id-everything-you-need-to-know.html>), Jonny Evans, Computerworld, "iPhone X & Face ID: Everything you need to know", SEP 13, 2017
6. (<https://www.wired.com/story/hackers-say-broke-face-id-security/>), Andy Greenberg, "Hackers say they've broken face ID a week after iphone x release", November 12, 2017