Explore – Impact of Computing Innovations
Written Response Submission Template

Please see [Assessment Overview and Performance Task Directions for Student](#) for the task directions and recommended word counts.

Computational Artifact

2a)

> The computing innovation represented by this computational artifact is augmented reality. It is simply meant to introduce the viewer to the world of augmented reality and explain what the technology is and why it's important. It shows examples of augmented reality in use and the many real life applications it has.

2b)

> To create my artifact, I used the online design tool Canva. I used a textured gray background available on the site and then added some text on the subject matter. I also used some relevant images depicting uses for augmented reality, which is what a large portion of my artifact is about. Canva allows me to directly type into the artifact I'm creating and drag the text around anywhere on the page that I'd like. It also allows me to format it as I want. The images I can upload from my device and also manipulate however I'd like.

Computing Innovation

2c)

Augmented reality, like any other technology, has both its benefits and drawbacks. It has a lot of potential uses in society. For instance, it is quite mobile and easy to use on smartphones. There are different apps that use AR for various reasons. For instance, the Ikea app uses AR to allow their users to digitally place items on sale in their home in order to help build a visual picture. This is just one example of ways that businesses can use AR to their advantage. Research shows that the mere inclusion of AR in their brand overall increases their value in the customers' eyes. AR is also useful as a live guide for various activities ranging from auto-maintenance to tourism. However, technology is only as good or bad as the people who use it. AR does have the potential to become a violation of personal privacy if it is used improperly. It's also possible that society in the future may become overly dependent on augmented reality and neglect the real reality. For instance, this technology has great potential as a teaching tool. However, if people are overly reliant on using AR to teach things like surgery, students would not have any actual real-life experience until they're their own doctors and there is a patient on the table in front of them entirely in their hands. AR is also quite expensive at this moment, which makes it a very unpredictable technology.

2d)

Augmented reality uses sensors to gather data. AR programs collect data about the environment such as the distance to objects (depth tracking). It also take data about the user's interactions and processes it. Using all of this information, the AR device can locate physical objects and create markers to augment reality. For instance, marker-based reality may be scanning for a specific symbol or marker to then turn into a 3D image. Superimposed AR scans the user's surroundings and then places AR images as per the user's requests in whatever location they require. When the camera being used to view the augmented reality moves away, the object remains where it is in that reality because of the geographic data that AR technology takes in and processes.

References

2e)

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