Using Open-CV and Arcu Markers for a Augmented Reality Scavenger Hunt

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Abstract

The goal for the assignment was to use Open-CV and an Arcu Marker card for a Augmented Reality Scavenger Hunt [1]. This is shown through the users webcam at the moment and the user holding up an Arcu Marker card. Then Open-CV will do the processing of putting an image on the card and showing facts about the current image being shown.

I. About the Assignment

I started off the assignment with looking at many tutorials for Open-CV and Arcu Markers[2]. This lead me toward where you found your starter code and I mostly followed the tutorial to get all four corners and superimpose the image onto the Arcu Marker card. The next steps for me were finding photos of Ursinus to put onto the card and the name of the place. This was done pretty easily by putting all the locations of the photos in a dictionary. For the basic product, I just chose a random photo from the dictionary and put out to the screen with the name of the place. This was done as there is minimum valuable product ready and easy to change the code to add more the project at a later date.

II. Future of Project

There is many ways the project can go in. Having different Acru Marker cards around campus that will pop up information about the location that the card is at. Having that be integrated into an app that the college uses for freshman to find their way around campus. This could have other implications like for tourists using the cards to find information about the city or a museum that are in. Finding things out that they would have never known about.

III. Conclusion

In conclusion, this project was fun to build and use. The options are endless for what to make with this idea. I think the most likely is to make an app for tourist to use when they are visiting other countries or cities so they learn a little about the culture that is there.

References

[1] Bill Mongan. *CS474: Human Computer Interaction: Eye Track Assignment Page*. URL: `https://www.billmongan.com/Ursinus-CS474 - Spring2022 / Assignments / Programming / AugmentedReality`. (accessed: 03.14.2022).

[2] Henry Wilt. *Augmented Reality Assignment Code*. URL: `https://github.com/hwilt/CS474/tree/main/Agumented_Reality`. (accessed: 03.14.2022).