

Promoting Health Using VR/AR Proposal

Team Members

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Introduce and Describe the Project

Given the increase in obesity and the common lack of physical activity among Americans and people of the world, we have decided to develop a project that aims to tackle this problem by giving users the opportunity to exercise at any given time while making it seem like a videogame. This is so that the feeling of playing a videogame makes the user forget the fact that they are working out. In order to facilitate the interest of exercise through gaming our project has to be interesting and engaging enough to get people to actually partake in the game. By using newer technologies like VR, the goal is to bring enough interest/wow factor by users to actually pursue trying the game. We plan on using the technologies described in the next section. With these technologies we can create many different athletic activities that users can partake in to play a specific skill they wish to improve on. The goal is to make it as close to real life as possible but with the limitation of current technologies it won't feel life like just yet.

Describe the Technology Being Used

We have decided to use tools such as the Oculus Quest and Unity to develop our project, one of the main reasons for which we have decided to go with the Oculus quest is the ease of access we have given that one of our members owns one. This will ensure availability at any given time to test new features and progress we make as we move forward. Although none of us have experience using Unity, we believe that it is a great platform that will allow us to develop a high quality project due to its great popularity and the large number of official and unofficial tutorials available on the web. We expect to find new and different technologies as the semester progresses and we research even more. Depending on the level of usability of these new found technologies and how much they apply to what we are trying to accomplish, we might consider incorporating some of these technologies.

Describe the motivation

Our members value fitness and well-being and believe that a healthy body and lifestyle is something that everyone should move towards. Many people claim to not have space to workout or the knowledge of what movements or exercises to do. For this reason, we want to create a project that sparks interest in working out while also facilitating activities by engaging the user in common movements that exist in sports throughout the world. Just because we find it enjoyable and easy to go to the gym and exercise on a regular basis doesn't mean everyone does. As a team we truly care about one's health and believe that everyone can find enjoyment in physical activity. We want to deliver a product that will get people up and moving on a regular

basis while enjoying it and perhaps encourages them to go out and exercise in a non-virtual environment.

DESCRIBE THE DELIVERABLES

- First Deliverable: Oculus Quest and development environment setup.
- Second Deliverable: Drawn out designs for the game, including obstacles, player, and the setting.
- Third Deliverable: Base designs implemented in unity and ready to be used.
- Fourth Deliverable: First set of maneuvers(Walking, running, and jumping) included within the game.
- Fifth Deliverable: Last set of maneuvers(Ducking, leaning, and spinning) included within the game.
- Last Deliverable: A complete VR game that allows the user to perform common sports maneuvers. The user will be able to walk, run, jump, duck, lean and spin within the game.

DESCRIBE THE END PRODUCT

By the end of this project we are hoping to deliver a simple game that allows the user to perform common athletic maneuvers that can help a person move more. Based on what the user selects on the menu, they can choose the ability to walk, run, jump, duck, lean and spin. These can help a user contribute to improving their physical abilities and will even include the ability to make it harder as the user improves.

References

1. ukactive Research Institute. 2014. Turning the Tide of Inactivity URL: http://researchinstitute.ukactive.com/downloads/managed/Turning_the_tide_of_inactivity.pdf [accessed 2020-02-10]
2. US Department of Health and Human Services. 2017. Facts & Statistics: Physical Activity URL:<https://www.hhs.gov/fitness/resource-center/facts-and-statistics/index.html> [accessed 2020-02-10]