VIRA

Virtual Insight into Real Athletics

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Project Overview

VIRA is a series of virtual reality modules that are designed to enhance Athletic Training students' on-the-job experience. The goal is to provide extra training and guidance for scenarios that Athletic Training students don't often see, such as traumatic injuries.

We plan to use an Oculus Quest headset and the Unity development platform.

Functional Requirements

- The user can log in and navigate to an injury evaluation module
- The user can choose between guided and quiz mode
- The user can view the limb in the module in multiple ways
- The user can review their progress and performance on modules over a period of time

Economic Requirements

Since our project plan is to primarily use resources that are available to us through Iowa State, our economic requirements are likely to be minimal.

- Limited by ECpE funds
- Potential for Unity Pro access
- Oculus Quest

Environmental Requirements

- Real-time, direct interaction with user
- Space to perform an injury evaluation simulation
- Recognition of fine hand movements within close proximity

Software Development Standards

Development and Architecture

- Agile Software Development
- Integrate early, integrate often
- High cohesion, low coupling

Module Design

- Consistent design throughout training modules
- Modules are easy to create and build onto
- Reach highest possible testability of modules

Conclusion

VIRA is an application that has a series of virtual reality modules for student Athletic Trainers. The goal of VIRA is to help prepare the students for real-life situations and give additional training for traumatic injuries.

The application will be made with the use of Unity and an Oculus Quest.