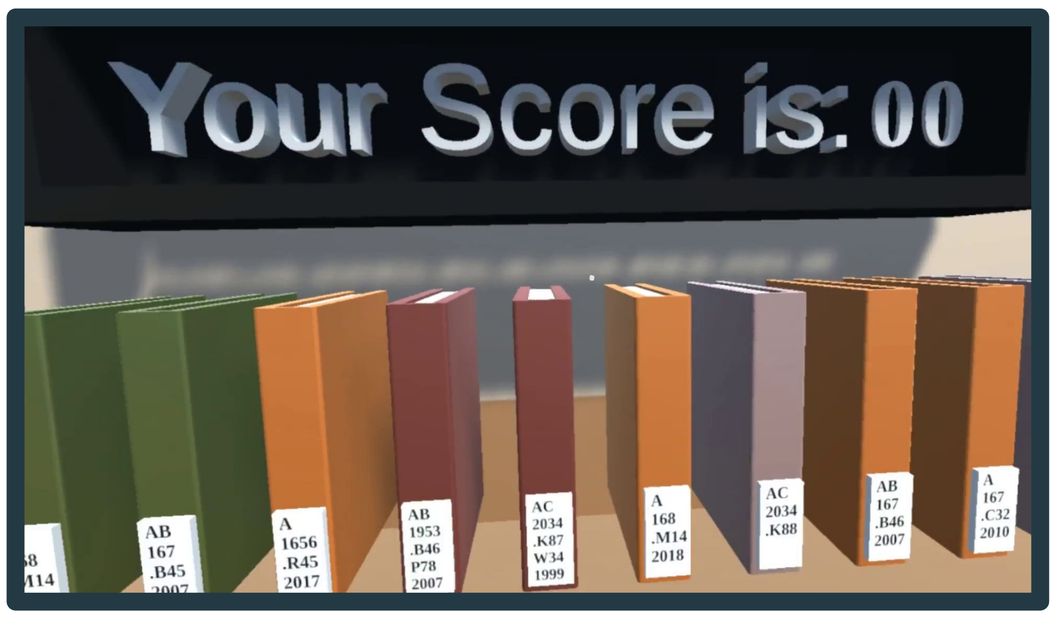
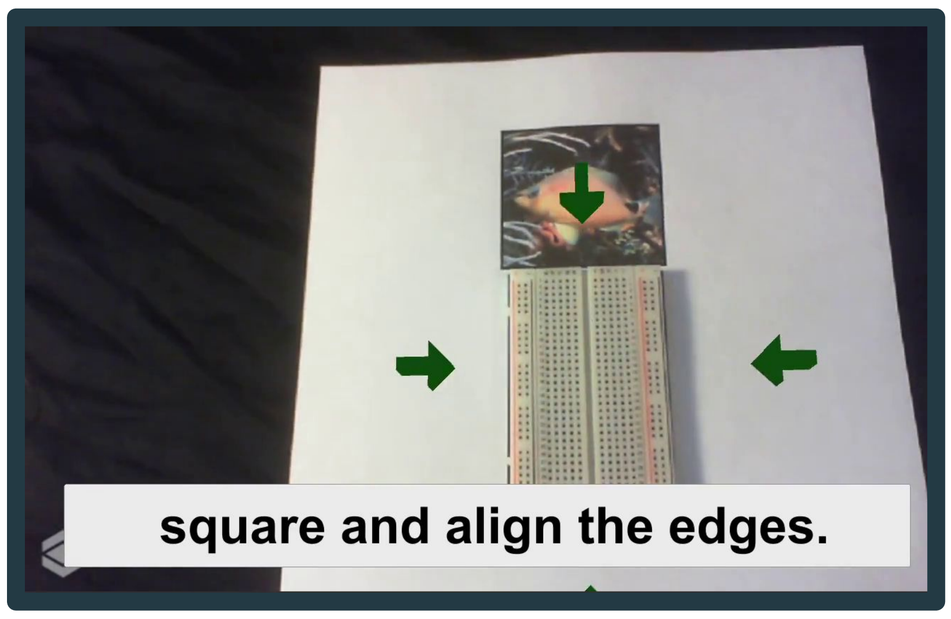
A Framework for Augmented and Virtual Reality Job Training: Using Digital Realities and Gamification to Improve Workplace and Educational Efficiency

By Phillip Ballo
Faculty Sponsor: Professor Bob Larson



ShelvingVR

A prototype shelving simulator for training student workers / community volunteers



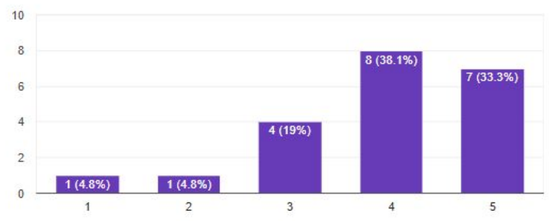
ElectronicsAR

A prototype electronics assembly simulator for computer guided teaching in makerspaces

Makertech-L Results (those in the makerspace field)

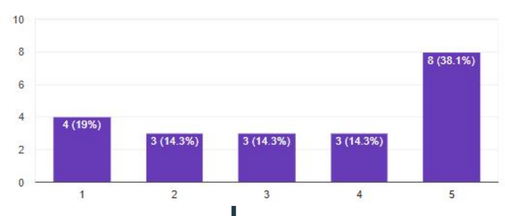
How likely are you to hire a potential student worker / community volunteer, for shelving books, with NO EXPERIENCE if they achieve a perfect score on a shelving game?

21 responses



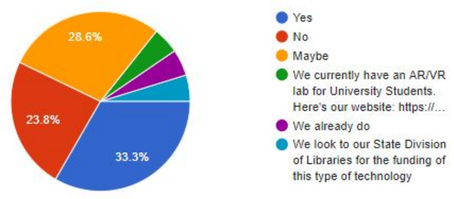
How likely are YOU to contribute to development of library specific virtual and/or augmented reality software and assets (contributions can include training others in software development, computer programming, or developing digital assets such as 3D models or music)? Please note that the software to develop such assets are interchangeable between augmented and virtual reality.

21 responses



Taking your CURRENT library's budget into consideration, would your library be willing to invest in augmented reality?

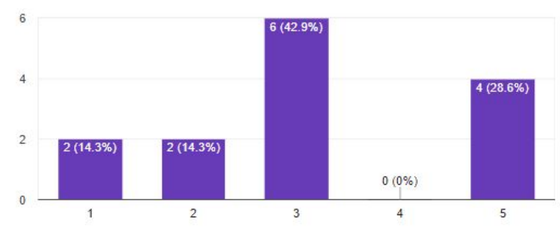
21 responses



RUSA - L Results (those in the Reference field)

How likely are you to hire a potential student worker / community volunteer, for shelving books, with NO EXPERIENCE if they achieve a perfect score on a shelving game?

14 responses



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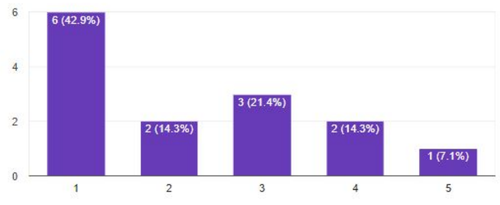

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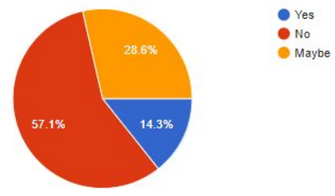

Problems:

There is a need to provide modern instruction and training in the library and information field.

Would those in the library field be willing to hire those who score perfect scores in VR as student workers / community volunteers?

What are the current and prevailing attitudes towards AR and VR technologies?

Results:

The survey shows that those in the library technology field (not shown, two other listservs) are more likely to implement AR/VR technology. Those outside of the field are more likely to be concerned about the technology but would not rule out hiring individuals trained in it.

Throughout the library field, however, there is a need for training and meaningful AR/VR software, a problem which has been solved by this capstone project.

Conclusion:

ShelvingVR and ElectronicsAR are meaningful open educational resources/software that other libraries can use for their AR/VR labs.

Libraries need to address several problems found in the survey in order to successfully implement an AR/VR lab.

That AR and VR technologies can be used as a way to screen potential hires for entry level jobs.