

V.I.L.L.A.G.E.
Virtual Information
Literacy Live Augmented
Game Experience

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LOEX 2023 Conference – May 12, 2023



Virtual Information Literacy Live Augmented Game Experience (VILLAGE)



SUL Virtual Reality Project Team's Goal

- Develop an open-source library-theme game using VR technology.
Mini games that help teach specific information literacy skills e.g. CRAAP Test
- Create a template that can be customized with an almost zero-coding approach.
- Make the open-source template available via GitHub.
- Share information-literacy lesson plan outlines using VR game via GitHub.

Current Team Members

- **Juan Denzer**, Lead Project Manager and Developer
Librarian
- **Michelle Mitchell**, Librarian Consultant
Librarian
- **Chloe Guedalia**, Game Designer
Graduate student, Information Science (iSchool)
- **Cheng Zhongquan (Peter)**, Game Developer and Designer
Undergraduate student, Computer Science
- **Rachel Hogan**, Game Designer
Graduate student, Information Science (iSchool)
- **Tony Lamont Fitzgerald Jr.**, Game and Spatial Designer
Graduate student, Architecture School
- **Andrew Thomas Markarian**, Game Developer and Designer
Undergraduate student, Computer Science

Why Virtual Reality?

Virtual reality (VR) has gained greater attention in recent years due to its increased accessibility with both cost and technological advancements. Devices such as the Meta Quest (formerly Oculus Quest 2) are less expensive, easier to maintain, develop, and distribute.

Stanford University launched their first course offered in VR, [Comm 166/266](#).

VR + Gaming = Learning

- VR offers an immersive experience
- VR creates an active learning space that is fun
- Gaming is used to engage with students
- Both VR and Gaming help students retain knowledge

Project Overview (1/2)

The project will also address the following:

- How quickly and easily can a VR game be developed using little to no coding.
- The effectiveness of a VR game for information literacy.
- The viability of distribution of the source code for the project.
- ROI for libraries and institutions.
- Feasibility of implementation of a VR session.

Hardware – Meta Quest 2

formally Oculus Quest 2

- Reasons for this VR device
 - Generally inexpensive compared to other high-end headsets (HTC VIVE, HP Reverb G2, etc.)
 - Standalone device vs tethered.
 - Android development platform
 - Ability to sideload VR application without submitting for review using SideQuest
 - Easier to setup and use in a teaching environment.

Software – Unity Platform

- The goal is to use freely available software
- Unity vs Unreal
 - The project doesn't need high-end graphics or performance.
- Other applications
 - Blender
 - Any image editing software similar to Photoshop, e.g. Krita
 - Photogrammetry software e.g. Unreal's RealityScan

Key Template Goals

- Development and environment that can be easily customized by skinning objects or using prefabricated Unity game objects (Prefabs).
 - Skinable objects include but not limited to:
 - Books – by scanning and cropping book covers
 - Signs, posters, paintings, etc. – by using cropped images
 - Laptop, tablets, monitors – by using cropped screenshots
 - Prefabs- game objects that can be reused in game scene building
- Create simple puzzles that can be customized without scripting
 - Such as lock combinations, color combinations, book sorting, etc.
 - Coding scripts will use parameters that are easy to enter and understand

First Mini-Game. Is it CRAAP?

- Game to practice the CRAAP test
- Escape room style detective scenario
- Game requirements
 - 5–10-minute game play
 - Sit down style
 - Hands only
 - Simple puzzles
 - All objects within reach
 - Designed to be played with hybrid lesson

Estimated Timeline

Summer 2023

- Pilot an information session with graduate student and IT Girls summer program iSchool feedback, identify bugs and best processes.
- Present and demo the project for library teaching group (LIBTEACH)

Spring 2024 and beyond

- Pilot a library instruction session in Spring 2024 with WRT 105/205
- FYS programs

Challenges for library sessions

- Timing
 - How quickly can a game be played in a session
 - How much time it takes to setup
- Format
 - Full VR game or hybrid session
- Budget
 - Cost of headsets
 - Device for every student or shared
- Equipment & Maintenance
 - How to load VR games
 - Update VR games

Future Tools to Consider (AI)

- AI
 - ChatGPT
 - Bard
- Image Generators
 - DALL-E /DALL -E2
- Music
 - Google’s MusicLM
- Text based Scripts
 - ChatGPT
 - Bard
- 3D generator
 - OpenAI’s Shap-E Model
- Game Objects
 - ChatGPT
- Passthrough technology

VILLAGE Project Links

- LibGuide

- <https://researchguides.library.syr.edu/sulvr>

- GitHub

- <https://github.com/Syracuse-University-Bird-Libraries/SUL-Escape-Room-VR>





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