Publishing Reality

Developing a Publishing Model For Augmented Reality, Virtual Reality, and Their Related Pedagogical Materials

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Today's Speakers

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Agenda

1. About the CMU Library Publishing Service
2. Augmented Reality & Virtual Reality
3. Shakespeare-VR
4. the KiltHub Repository
5. Depositing Shakespeare-VR in KiltHub
6. Emerging Needs

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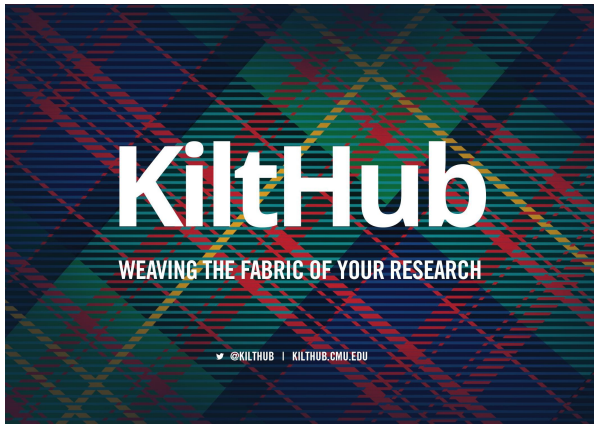
About the CMU Library Publishing Service



JANEWAY

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Augmented Reality & Virtual Reality

- Definitions
  - **AR** (Augmented Reality): An interactive experience in a real-world environment augmented with computer-generated overlaid information (Audio + Visual)

  - **VR** (Virtual Reality): A Simulated experience used to mimic real world environment accessed through headsets or multi-projected environment.

- Issues with AR/VR Preservation for Education
  - Preservation vs. Use
  - Systems may or may not allow for access inside a interface
  - Updates required to VR material to maintain usability

AMERICAN SHAKESPEARE CENTER

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Shx-VR.com

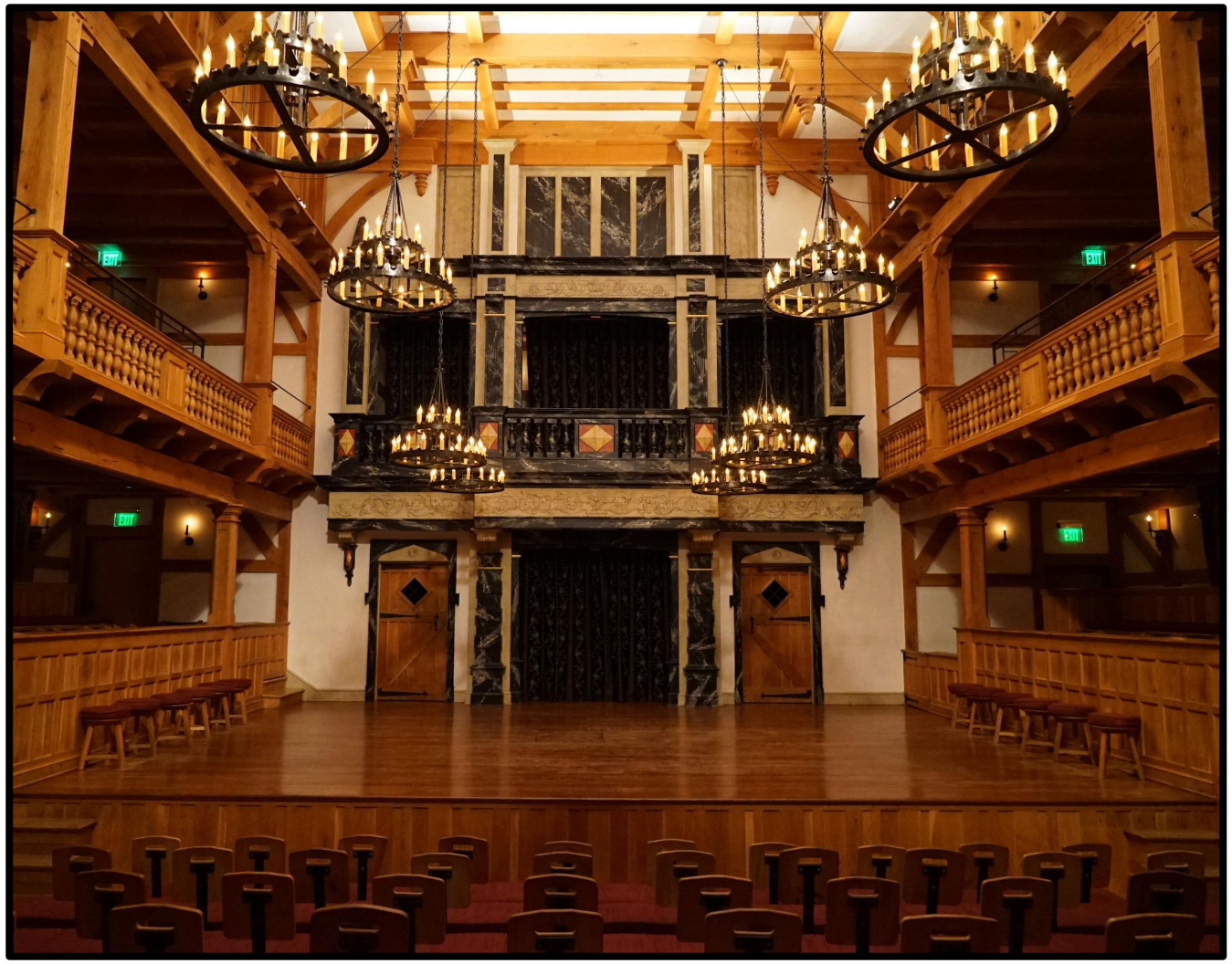
Shakespeare-VR

Shakespeare-VR.library.cmu.edu uses virtual reality technologies to bring students face-to-face with professional actors performing Shakespearean soliloquies in a replica of Shakespeare's Blackfriars Playhouse.

Viscerally teaches students how the audience is part of any Shakespeare play.

<u>Team</u>

Stephen Wittek, Stitchbridge, American Shakespeare Company, CMU Libraries Lab, CMU LPS, and many others.



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Curating 360° VR Data

Raw footage

- Raw footage before any editing or stitching
- 17 different camera views per scene
- Can be re-used and re-mixed by experts
- Preserves the full data from the recording sessions
- *Requires complex directory structure (difficult with our IR provider)*

Stitched and edited film

- Final high-quality edits of the scene
- Can be played and understood by humans on desktop, phone, or VR headset
- Preserves the final intended experience

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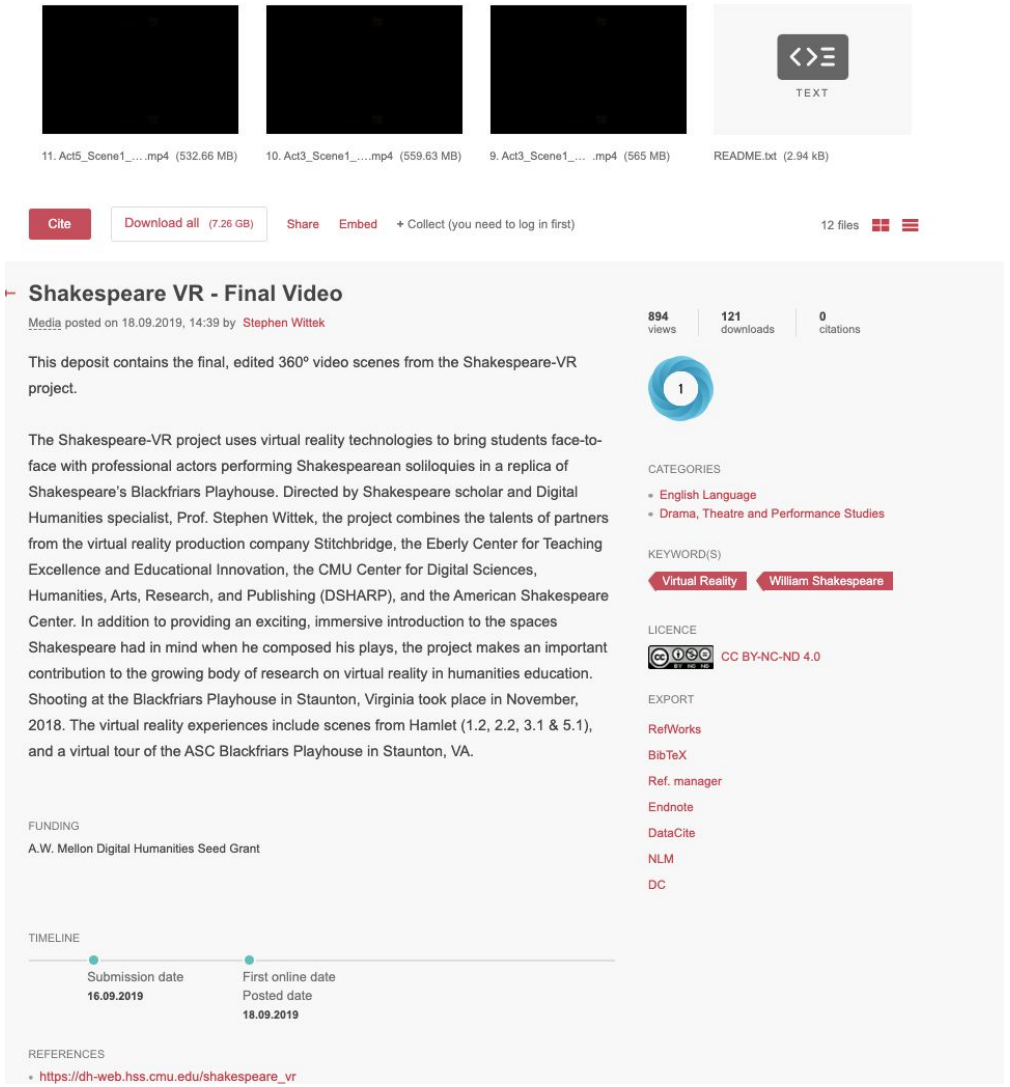
The KiltHub Repository

The KiltHub Repository uses Figshare.

- Figshare is an online open access repository to share research outputs including datasets, images, figures, videos, and audio files. [https://figshare.com/]
- Each deposit has its own metadata record, citation, copyright notice, and DOI
- Multiple files can be included within the same deposit
- Data Deposits accompanied by a README.txt file (required for KiltHub Data Deposits)
- Views, downloads, citations, and altmetric data being tracked



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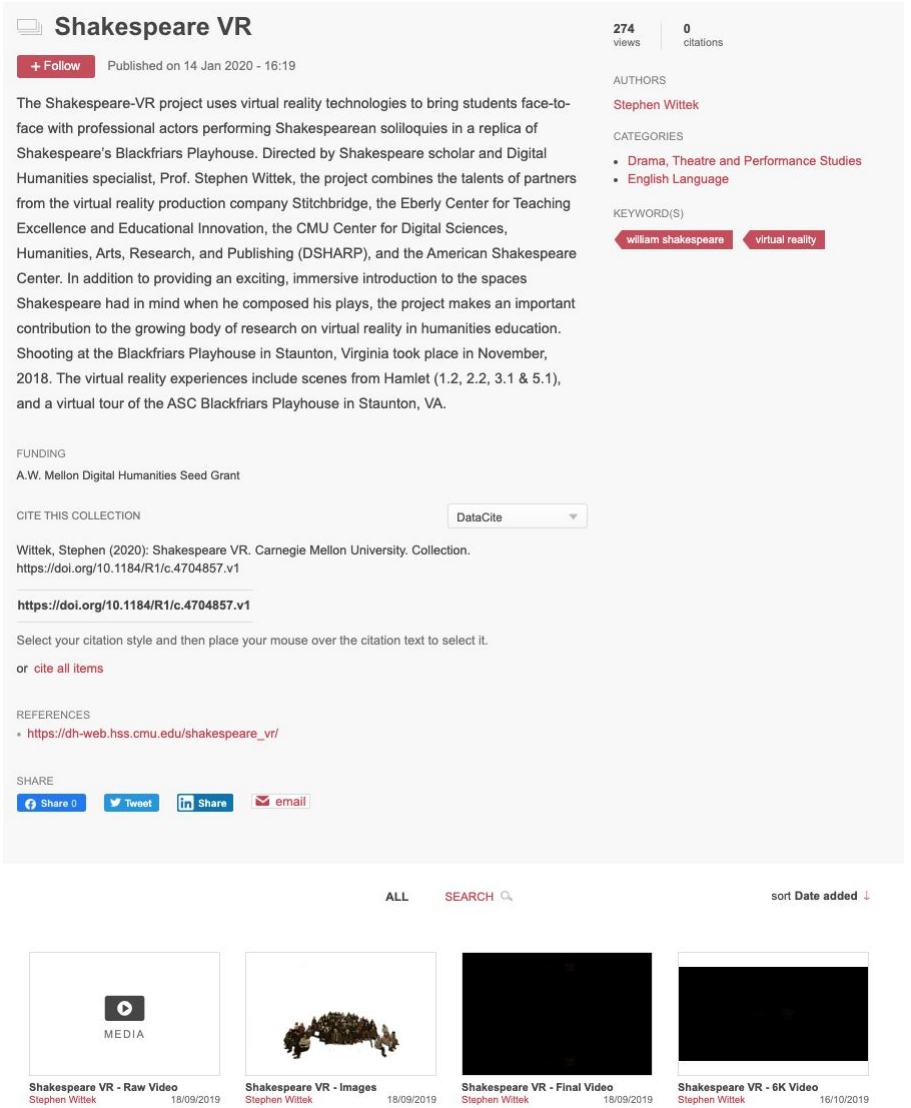
Shakespeare-VR Collection

Shakespeare-VR Collection on the KiltHub Repository

- Arrangement tool within Figshare
- Same benefits of individually published content
  - Citations, Discoverability, DOI
- Items are grouped together within the Collection under one description, citation, DOI
- Collection lists views, citations, and Altmetric data associated at Collection-level



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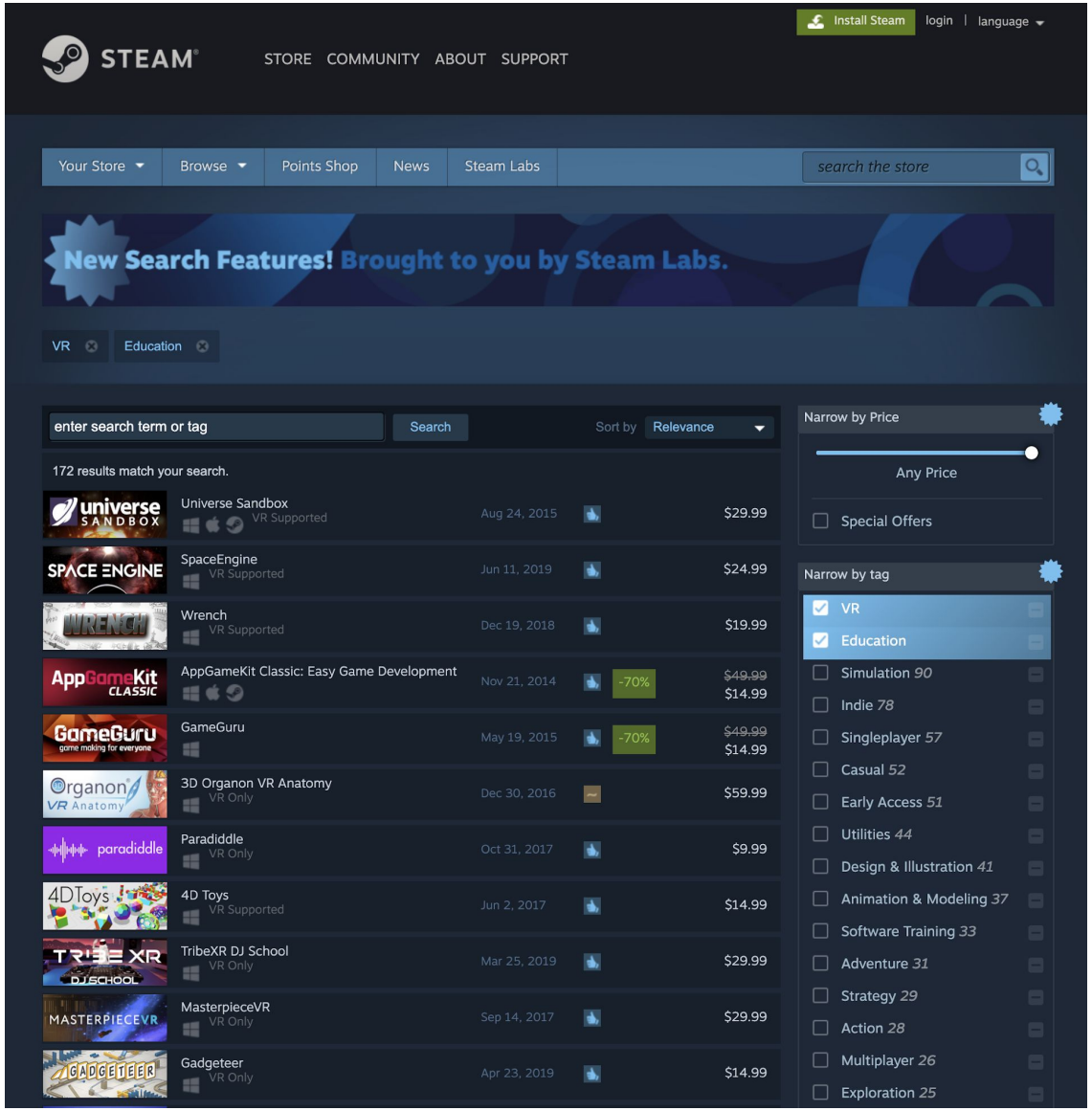
Emerging Needs

- KiltHub (IRs) are good for access to static content
- KiltHub is not appropriate for streaming content or to interact with VR
- Use Case: CMU ETC student VR projects
- **Valve** created **Steam** in 2003 to digitally distribute games and apps. Steamworks is the set of tools and services to distribute games on Steam.
- LPS as game publisher can provide the administration and institutional continuity.



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Pictures of the The Fence, in the middle of the Cut, on the CMU Pittsburgh campus. The top image includes the Hunt Library in the upper left corner. Photo Credit: Emma Slayton CC-BY-NC (2020).

Access to the Slides and Recording: https://doi.org/10.1184/R1/12668783.v1

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Links

CMU Library Publishing Service: https://lps.library.cmu.edu/

CMU Entertainment Technology Center: https://www.etc.cmu.edu/learn/about-the-etc/

KiltHub: https://kilthub.cmu.edu/

Shakespeare-VR: https://shakespeare-vr.library.cmu.edu/

Shakespeare VR KiltHub Collection: https://doi.org/10.1184/R1/c.4704857.v1

Steamworks: https://partner.steamgames.com/

Valve Software: https://www.valvesoftware.com/

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