



Publishing Reality

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

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*author order alphabetical

Today's Speakers



Hannah Gunderman



Matt Lincoln



Rikk Mulligan



Dave Scherer



Emma Slayton

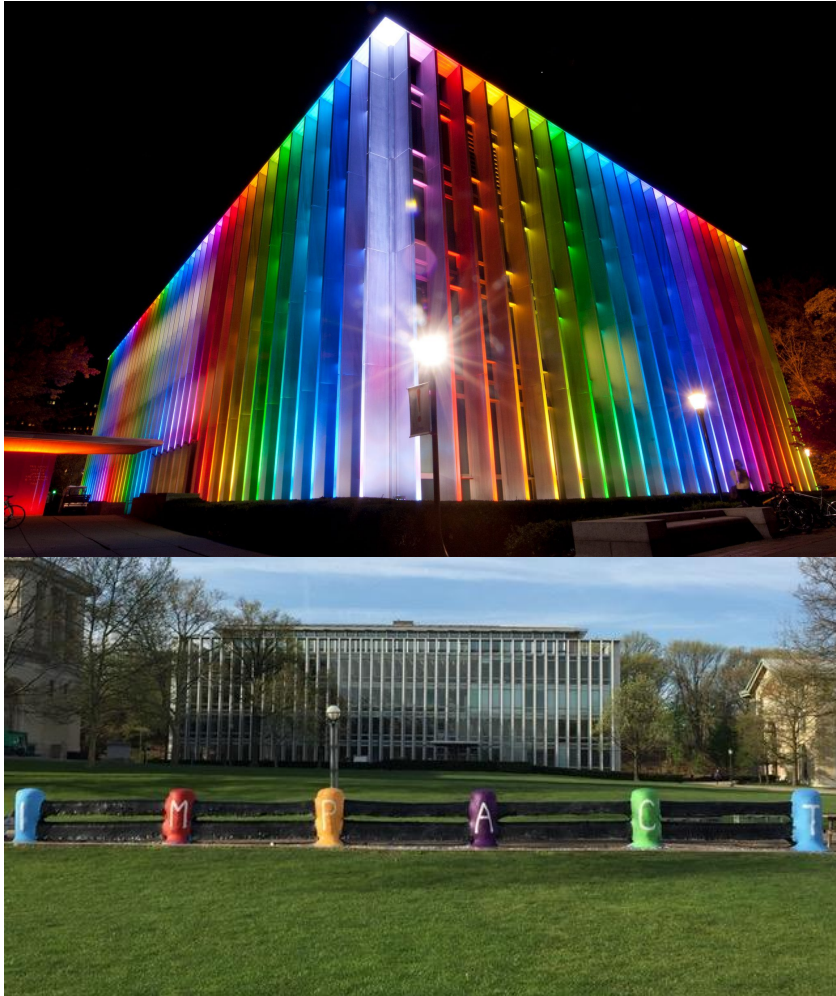


Scott B. Weingart

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

About the CMU Library Publishing Service



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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



Carnegie Mellon University
DEPARTMENT OF
ENGLISH

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.

Team

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



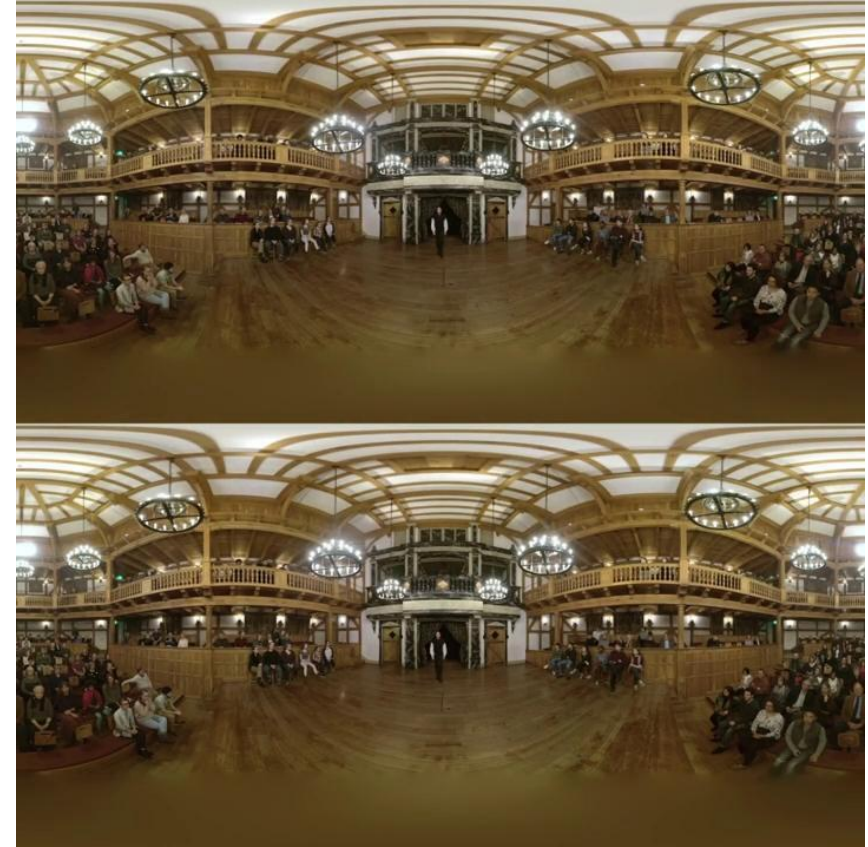
Curating 360° VR Data

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

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

The screenshot shows a Figshare deposit page for 'Shakespeare VR - Final Video' by Stephen Wittek. At the top, there are four file thumbnails: three video files (11.Act5_Scene1_....mp4 (532.66 MB), 10.Act3_Scene1_....mp4 (559.63 MB), 9.Act3_Scene1_....mp4 (565 MB)) and a README.txt file (2.94 kB). Below the thumbnails are buttons for 'Cite', 'Download all (7.26 GB)', 'Share', 'Embed', and '+ Collect (you need to log in first)'. The page title is 'Shakespeare VR - Final Video' with a subtitle 'Media posted on 18.09.2019, 14:39 by Stephen Wittek'. The main text describes the project: 'This deposit contains the final, edited 360° video scenes from the Shakespeare-VR project. The Shakespeare-VR project uses virtual reality technologies to bring students face-to-face with professional actors performing Shakespearean soliloquies in a replica of Shakespeare's Blackfriars Playhouse. Directed by Shakespeare scholar and Digital Humanities specialist, Prof. Stephen Wittek, the project combines the talents of partners from the virtual reality production company Stitchbridge, the Eberly Center for Teaching Excellence and Educational Innovation, the CMU Center for Digital Sciences, Humanities, Arts, Research, and Publishing (DSHARP), and the American Shakespeare Center. In addition to providing an exciting, immersive introduction to the spaces Shakespeare had in mind when he composed his plays, the project makes an important contribution to the growing body of research on virtual reality in humanities education. Shooting at the Blackfriars Playhouse in Staunton, Virginia took place in November, 2018. The virtual reality experiences include scenes from Hamlet (1.2, 2.2, 3.1 & 5.1), and a virtual tour of the ASC Blackfriars Playhouse in Staunton, VA.' The page also shows '894 views', '121 downloads', and '0 citations'. A circular progress indicator shows '1' out of 1. The 'CATEGORIES' section lists 'English Language' and 'Drama, Theatre and Performance Studies'. The 'KEYWORD(S)' section lists 'Virtual Reality' and 'William Shakespeare'. The 'LICENCE' section shows 'CC BY-NC-ND 4.0'. The 'EXPORT' section lists 'RefWorks', 'BibTeX', 'Ref. manager', 'Endnote', 'DataCite', 'NLN', and 'DC'. The 'FUNDING' section lists 'A.W. Mellon Digital Humanities Seed Grant'. The 'TIMELINE' section shows 'Submission date 16.09.2019' and 'First online date Posted date 18.09.2019'. The 'REFERENCES' section lists 'https://dh-web.hss.cmu.edu/shakespeare_vr'.

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

 **Shakespeare VR**

[+ Follow](#) Published on 14 Jan 2020 - 16:19

The Shakespeare-VR project uses virtual reality technologies to bring students face-to-face with professional actors performing Shakespearean soliloquies in a replica of Shakespeare's Blackfriars Playhouse. Directed by Shakespeare scholar and Digital Humanities specialist, Prof. Stephen Wittek, the project combines the talents of partners from the virtual reality production company Stitchbridge, the Eberly Center for Teaching Excellence and Educational Innovation, the CMU Center for Digital Sciences, Humanities, Arts, Research, and Publishing (DSHARP), and the American Shakespeare Center. In addition to providing an exciting, immersive introduction to the spaces Shakespeare had in mind when he composed his plays, the project makes an important contribution to the growing body of research on virtual reality in humanities education. Shooting at the Blackfriars Playhouse in Staunton, Virginia took place in November, 2018. The virtual reality experiences include scenes from Hamlet (1.2, 2.2, 3.1 & 5.1), and a virtual tour of the ASC Blackfriars Playhouse in Staunton, VA.

274 views

0 citations

AUTHORS

[Stephen Wittek](#)

CATEGORIES

- Drama, Theatre and Performance Studies
- English Language

KEYWORD(S)

[william shakespeare](#) [virtual reality](#)

FUNDING

A.W. Mellon Digital Humanities Seed Grant

CITE THIS COLLECTION

[DataCite](#)

Wittek, Stephen (2020): Shakespeare VR. Carnegie Mellon University: Collection.
<https://doi.org/10.1184/R1/c.4704857.v1>

<https://doi.org/10.1184/R1/c.4704857.v1>


Select your citation style and then place your mouse over the citation text to select it.
or [cite all items](#)


REFERENCES

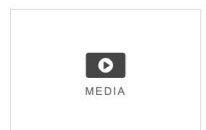
- https://dh-web.hss.cmu.edu/shakespeare_vr/

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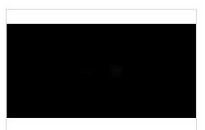
Shakespeare VR - Raw Video
Stephen Wittek
18/09/2019



Shakespeare VR - Images
Stephen Wittek
18/09/2019



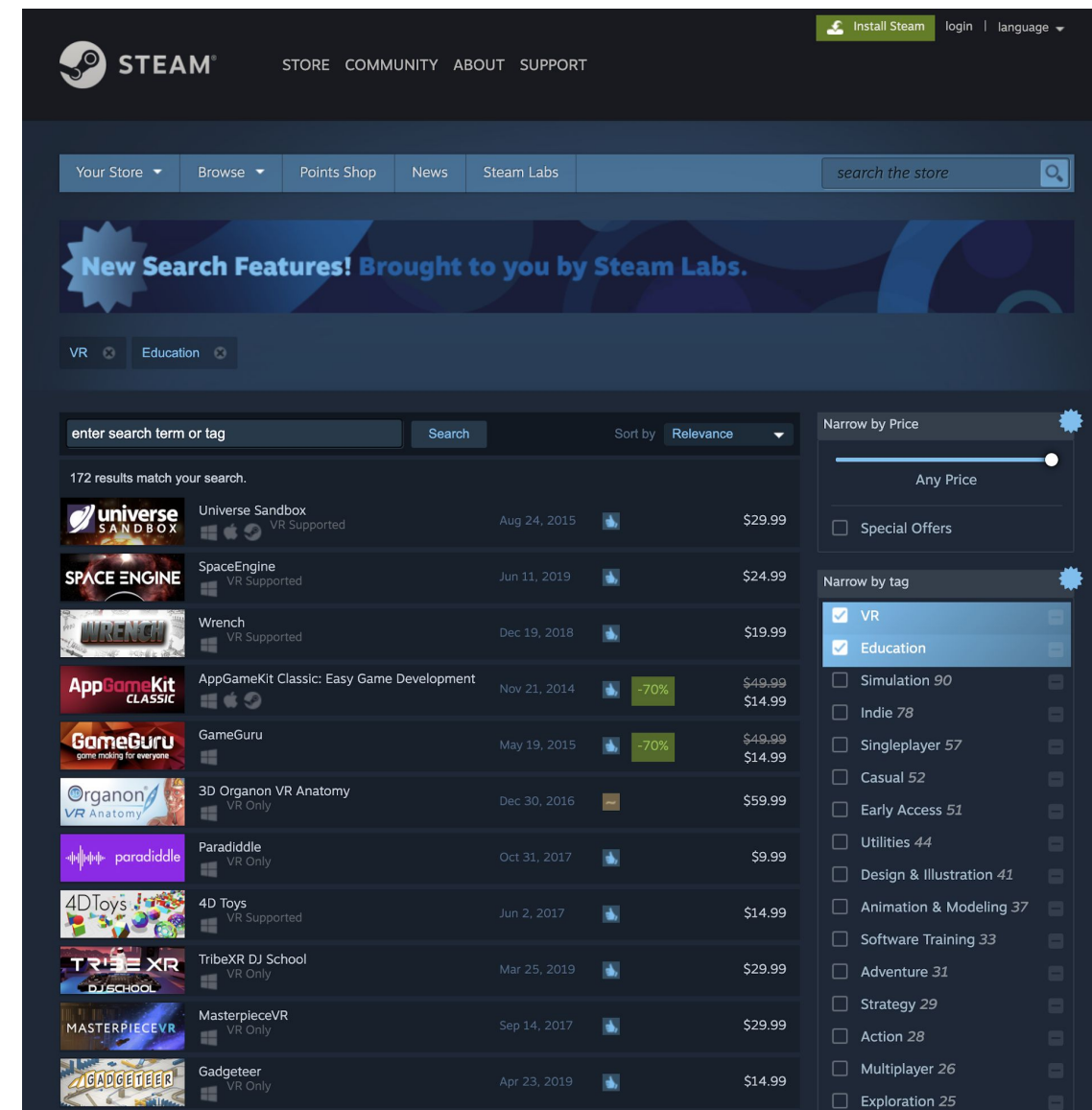
Shakespeare VR - Final Video
Stephen Wittek
18/09/2019



Shakespeare VR - 6K Video
Stephen Wittek
16/10/2019

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>

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/>