

DE GRUYTER
OLDENBOURG

ASSASSIN'S CREED IN THE CLASSROOM

HISTORY'S PLAYGROUND OR A STAB IN THE DARK?

Edited by Erik Champion and Juan Hiriart

VIDEO GAMES AND THE HUMANITIES

Linking Digital Heritage, Games & Virtual Tourism



[Menningararfur í sýndarheimum - Cultural Heritage in Virtual Worlds](#)

Veröld - House of Vigdís; University of Iceland
107 Brynjólfsgata 107 Reykjavík Iceland 2-5 PM 20.10.2023

ERIK CHAMPION, University of South Australia



Erik Champion has been a game design teacher, a heritage visualization expert, and architectural historian (of Nordic modernism!) He is currently an Enterprise Fellow at the University of South Australia, Adelaide, Australia. From 2016-2020 he was UNESCO Chair of Cultural Heritage and Visualisation at Curtin University.



RETHINKING VIRTUAL PLACES



ERIK M. CHAMPION

Edited by ERIK CHAMPION, CHRISTINA LEE, JANE STADLER, and ROBERT PEASLEE

SCREEN TOURISM AND AFFECTIVE LANDSCAPES

The Real, the Virtual, and the Cinematic

ROUTLEDGE CULTURAL HERITAGE AND TOURISM SERIES



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PLAYING PLACE

BOARD GAMES, POPULAR CULTURE, SPACE

EDITED BY CHAD WANDL AND D. MEDINA LASANSKY



DE GRUYTER OLDENBOURG

TEACHING THE MIDDLE AGES THROUGH MODERN GAMES

USING, MODDING AND CREATING GAMES FOR EDUCATION AND IMPACT

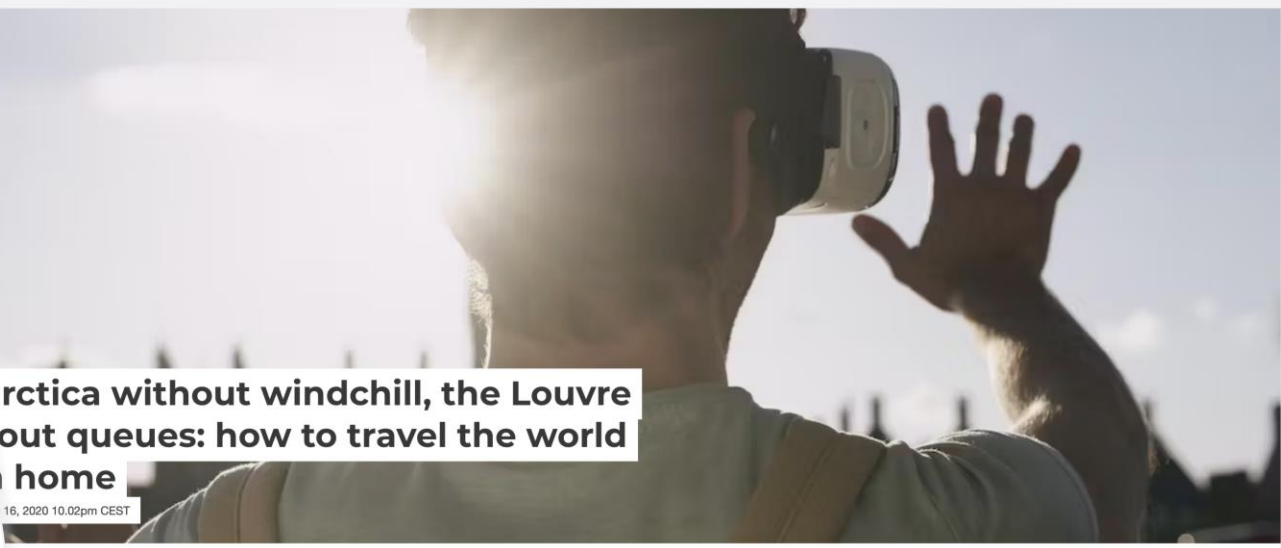
Edited by Robert Houghton

VIDEO GAMES AND THE HUMANITIES



3D Digital Heritage- key challenges

- **Animating** and **engaging** 3D via games
- **Game-like interaction to increase richness and immersivity** of XR (extended reality) and virtual tourism.
- Can **3D** heritage, **scholarly** ecosystems, tourism, and public involvement be brought closer together?
- Can data *and our understanding of that data* be recorded, interpreted, and shared more **fairly, openly, democratically**?



Arctica without windchill, the Louvre without queues: how to travel the world from home


16, 2020 10.02pm CEST

SpaceX's recent [Falcon 9 rocket launch](#) proves humanity has come leaps and bounds in its effort to reach other worlds. But now there's a quicker, safer and environmentally friendlier way to travel to the centre of the galaxy – and you can do it too.

Author



Erik Malcolm Champion
UNESCO Chair of Cultural Heritage and Visualisation,
Curtin University



Virtual reality adds to tourism through touch, smell and real people's experiences

Published: March 4, 2019 7.58pm CET

Virtual reality can bring historical sites to life.

Email

Twitter

Facebook

LinkedIn

Print

60
406

Back in 2001, an acquaintance who worked for Lonely Planet told me about a surprise discovery. The travel guide business had an audience of people who would buy their travel books, but never travel. Lonely Planet dubbed them "virtual tourists".

Author



Erik Malcolm Champion
UNESCO Chair of Cultural Heritage and Visualisation,
Curtin University

Disclosure statement

Immersive / interactive GLAM topics

GLAM Challenges:

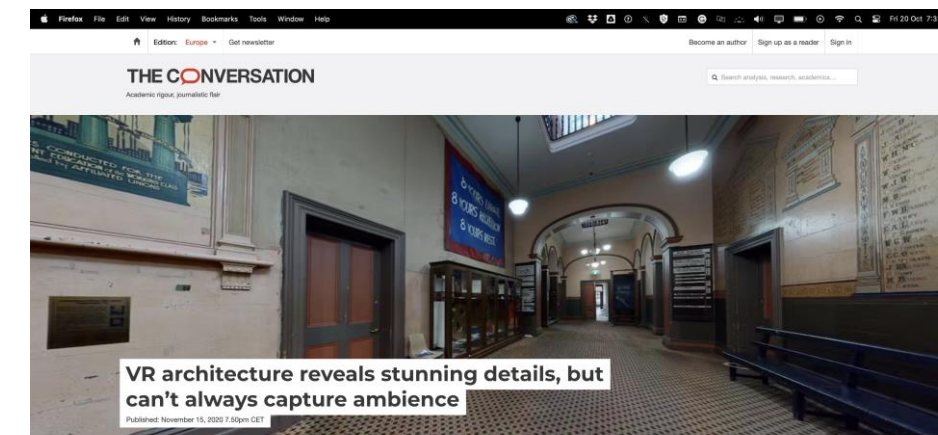
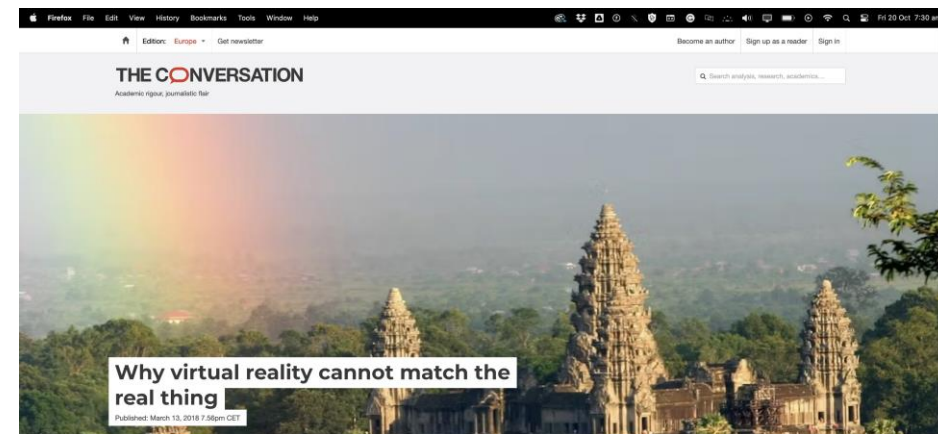
- How to improve GLAM visitation, preserve, and disseminate?
- Immersive literacy
- Vanishing Virtual? 3D Infrastructures don't infrastructure. Past NOT history?

Digital Technologies:

- Virtual worlds, XR, Student Projects

Museum Opportunities:

- Open Intelligent Formats and process-driven XR
- Collaboration not presentation e.g. Heritage Decision-making (LEEDS) 'How should decisions about heritage be made?' (2013-2015)



GALLERIES
LIBRARIES
ARCHIVES
MUSEUMS
challenges





ACCESS: 104,500 MUSEUM CHALLENGES

“In 2020, museums were closed for an average of 155 days, and since the beginning of 2021, many of them have again had to shut their doors, resulting, on average, in a 70% drop in attendance and a 40-60% decline in revenue compared to 2019.”

<https://www.unesco.org/en/articles/supporting-museums-unesco-report-points-options-future?hub=417>



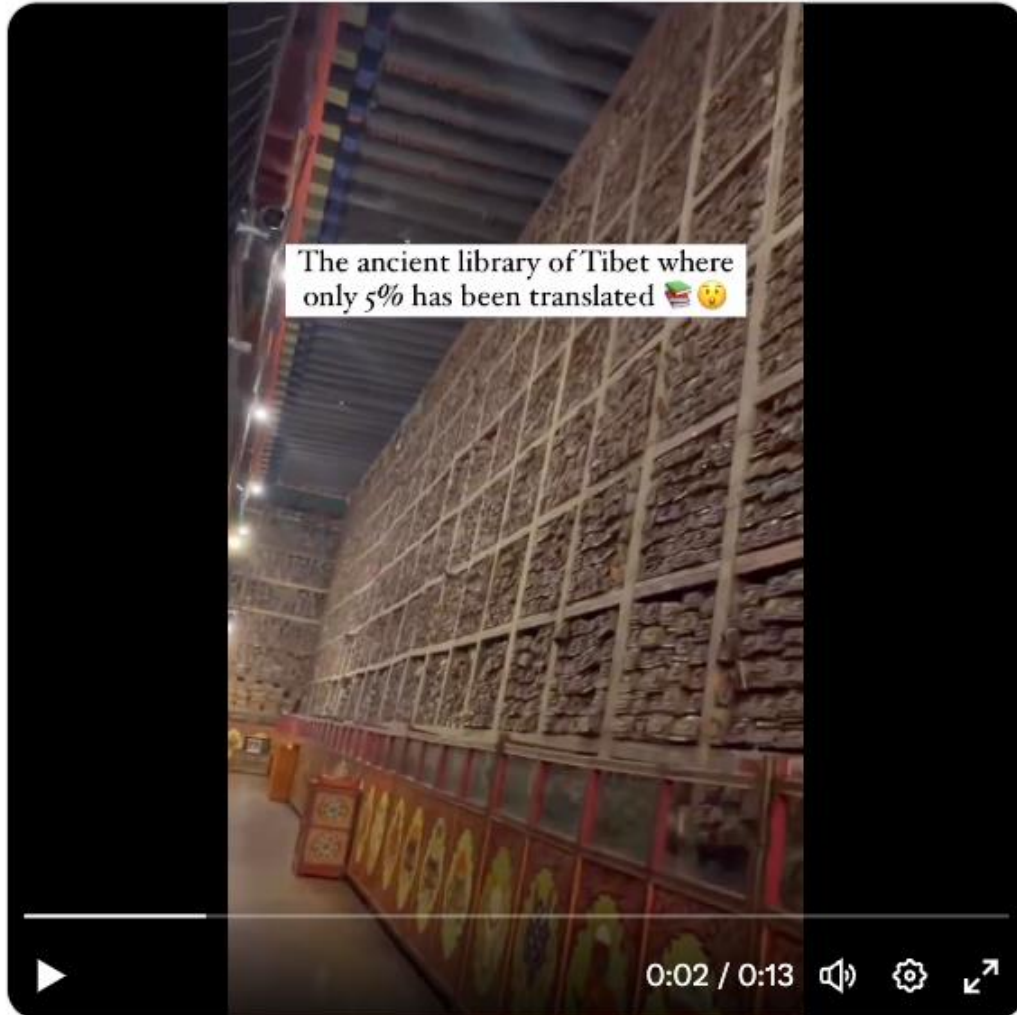
Archaeo - Histories @archeohistories · 20h ·

...

Sakya Monastery Library; one of most incredible ancient libraries one can encounter is located inside Sakaya Monastery in Shigatse, Tibet.

Built in 1073 CE, Sakaya library is home to 84,000 scrolls that have remained untouched for hundreds of years.

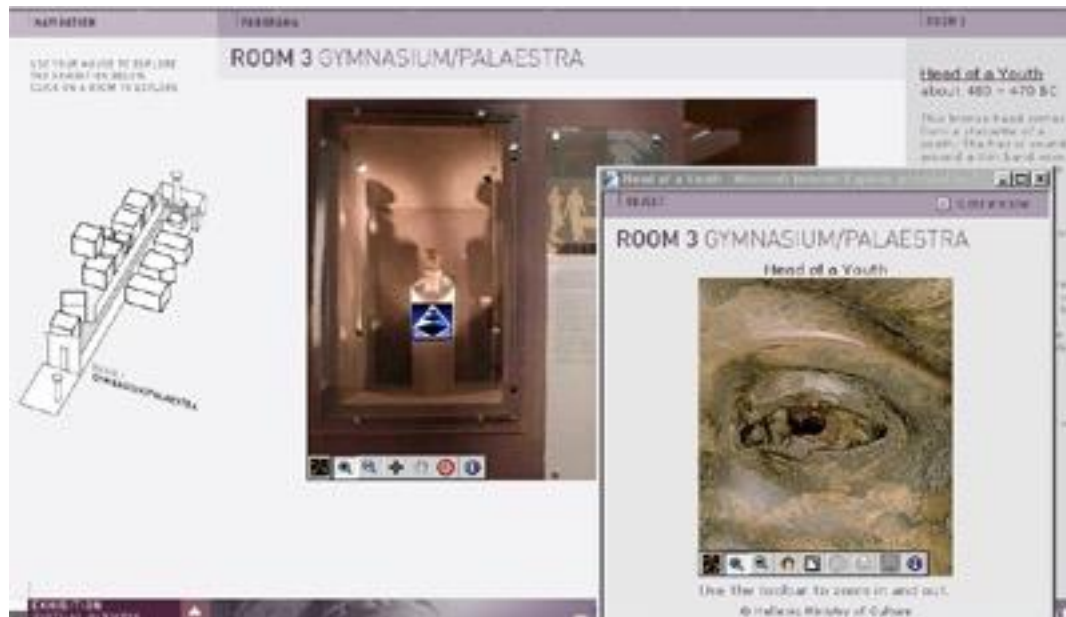
Over 40,000 volumes of... [Show more](#)



<https://twitter.com/i/status/170076701119293448>

Virtual Heritage: GLAM-TOURISM Challenges

- Single user, expensive(?), closed systems
- Fact, fiction, educated guess?
- Soon obsolete
- Limited interaction, evaluation, education
- Very expensive, we need to train staff
- IT obsolescence, internet
- Visitors don't download AR apps
- Human Guides are superior



1000 Years Of The Olympic Games: Treasures Of Ancient Greece: Digital Reconstruction At The Home Of The Gods. ([Ogleby](#), [Kenderdine](#) 2001).



Museums

Fremantle Prison© Dr Hafizur Rahaman.
No Wi-Fi, head curator skeptical of VR/MR benefits

FAIR & CARE principles ICOMOS GA 2023 DH



- <https://ardc.edu.au/resource-hub/making-data-fair/>: findable, accessible, interoperable and reusable.
- <https://ardc.edu.au/resource/the-care-principles/>
- <https://www.gida-global.org/care>
- <https://www.nature.com/articles/s41597-021-00892-0>



<https://www.gida-global.org/care>

The Vanishing Virtual



<http://www.geek.com/news/expore-the-virtual-forbidden-city-courtesy-of-ibm-593731/> and
<http://www.beyondspaceandtime.org/>

Mure Dickie, October 10, 2008 Financial Times: "A virtual Forbidden City offering the kind of immersive and interactive online experience pioneered by multiplayer role-playing games such as Second Life."

Conference/event name	VSMM		CAA		CIPA		EUROMED		Digital Heritage		
Accessible articles & Year of publication Publications don't link to 3D assets	Year	No.	Year	No.	Year	No.	Year	No.	Year	No.	
	2017	55	2015	117	2017	111	2016	105	2015	270	
	2016	65	2014	73	2015	82	2014	84	2013	211	
	2014	53	2013	50	2013	112	2012	95	-	-	
	Total	173	240		305		284		481		
Articles contain reference of 3D heritage assets	31		38		79		61		55		
References include											
(a)	Accessible 3D contents	0		1		3		1		4	
(b)	Video	1		2		1		2		6	
(c)	Other visual materials (VR models, photographs, images of 3D etc.)	1		4		6		5		17	
(d)	Links not accessible/dead	3		0		5		3		8	












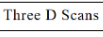















Repository	MyMiniFactory	Blendswap	3D Warehouse	TurboSquid	ShareCG	3DExport	Free3D	Unity Asset Store	Poly
Sketchfab	MyMiniFactory	Blendswap	3D Warehouse	TurboSquid	ShareCG	3DExport	Free3D	Unity Asset Store	Poly
https://sketchfab.com	https://myminifactory.com	https://www.blendswap.com	https://3dwarehouse.sketchup.com	https://turbosquid.com	https://sharecg.com	https://3dexport.com	https://free3d.com	https://assetstore.unity.com	https://poly.google.com
									
Various options, subscriptions for education & museum	Free and paid	Free	Free	Free and paid	Free	Free and paid	Free and paid	Free and paid	Free
File formats	54 file formats	37 file formats	.SKP	16 file formats	47 file formats	16 file formats	14 file formats	FBX or OBJ	OBJ, glTF, GLB
Model Licenses: Various	Varying Creative Commons	General Model License Agreement	Model Licenses: Various	Creative Commons BY-NC-ND License	Basic and Extended License	Model Licenses: Various	Model Licenses: Various, Asset Store EULA.	Publish under a BY 3.0 license	
Membership tiers: Basic-50MB, Pro-200MB, Premium-500MB, Business-unlimited	Unlimited uploads	Free 90MB upload and 200MB download	50MB (max) upload	No limit	180MB	500 MB	Not known	4GB (max) upload. Unlimited download	100MB
2D, AR, VR	2D	2D	2D, 3D	2D, 3D	2D	2D	2D	2D	2D, 3D
3 million models (200000 free models), 100000 CH models (28000 downloadable)	76287 published, printable objects (30 Jan 2020)	21975 models (30 Jan 2020)	Not known	820048 models (30 Jan 2020)	9550 models (30 Jan 2020)	169298 models (30 Jan 2020)	225250 models (30 Jan 2020)	Not known	Not known

Table 1. Non-commercial institutional repositories - 3D hosting features offered (selective).

sonian	Three D Scans	CyArk	Europeana	EPOCH	CARARE	NASA 3D Resources			
3d.si.edu	http://threedscans.com	http://cyark.org	http://europeana.eu/portal/en	http://epoch-net.org	http://pro.carare.eu	https://nasa3d.arc.nasa.gov			
									
Free	Free	Free, require prior application	Free	Free	Free	Free			
.blend, f3z, DZ, Single point cloud	OBJ, STL	LIDAR, point cloud, photogrammetric imagery	JPEG, GIF, PNG, PDF, Plain ASCII, MP3, MPEG, AVI, FBX, MTL, OBJ, WRL	PDF	PDF, 3D PDF	STL, 3DS			
exceptions access to the datasets	No copyright restrictions	Licensed under a Creative Commons Attribution-Non-commercial 4.0 International License	Databases/assets are hosted by external contributors	Not known	Not known	Non-Commercial Use only			
1 limit is not known	Unlimited	Varies, prior permission required	Not known	Unlimited	Unlimited	Unlimited			
3D	2D, 3D, animated gif	2D, 3D	2D, 3D	2D	3D inside PDF	2D			
Not known	Not known	200+ sites	50 million+ items, 3D not known	Not known	Not known	324 models (30 Jan 2020)			
Sketchfab	MyMiniFactory	Blendswap	3D Warehouse	TurboSquid	ShareCG	3DExport	Free3D	Unity Asset Store	Poly
https://sketchfab.com	https://myminifactory.com	https://www.blendswap.com	https://3dwarehouse.sketchup.com	https://turbosquid.com	https://sharecg.com	https://3dexport.com	https://free3d.com	https://assetstore.unity.com	https://poly.google.com
									
Various subscriptions, discounted fees for education & museum	Free and paid	Free	Free	Free and paid	Free	Free and paid	Free and paid	Free and paid	Free
50 file formats	54 file formats	37 file formats	.SKP	16 file formats	47 file formats	16 file formats	14 file formats	FBX or OBJ	OBJ, glTF, GLB
Creative Commons licensing. Upload varies on membership	Model Licenses: Various	Varying Creative Commons	General Model License Agreement	Model Licenses: Various	Creative Commons BY-NC-ND License	Basic and Extended License	Model Licenses: Various	Model Licenses: Various, Asset Store EULA.	Published under a CC-BY 3.0 license
Basic-50MB, Pro-200MB, Premium-500MB, Business-unlimited	Unlimited uploads	Free 90MB upload and 200MB download	50MB (max) upload	No limit	180MB	500 MB	Not known	4GB (max) upload. Unlimited download	100MB
2D, 3D, AR, VR	2D	2D	2D, 3D	2D, 3D	2D	2D	2D	2D	2D, 3D
3 million models (200000 free models), 100000 CH models (28000 downloadable)	76287 published, printable objects (30 Jan 2020)	21975 models (30 Jan 2020)	Not known	820048 models (30 Jan 2020)	9550 models (30 Jan 2020)	169298 models (30 Jan 2020)	225250 models (30 Jan 2020)	Not known	Not known

Heritage Decisions (LEEDS)

Heritage Decision-making (LEEDS)

1. Act: Make a change from where you are
2. Connect: Cross boundaries and collaborate
3. Reflect: See your work through others' eyes
4. Situate: Understand your work in context

My partial suggestions:

1. VR as Simulation Engines
2. Linked Open Data +usage
3. Culturally *Significant* Presence
4. Mixed and Augmented Reality (XR)

<https://heritagedecisions.leeds.ac.uk/about/> A Participatory Research Project

“Heritage is about what we value: places, buildings, objects, memories, cultures, skills or ways of life. So why can it be so hard to get actively involved in heritage decision-making? Heritage becomes defined when decisions are made: what to preserve, what to show, what to think of as worth celebrating and sharing. In our research project we explored how such decisions could be opened up to democratic participation.”

Community Panoramas



VIDEO of Narrator

Demetrius Lacet, Brazil

PhD: U. of Melbourne-Lonely Planet 2001-4

Evaluation	Content'' (intro, 3 Archaeology, 3 gamic)	Objective: Compare to
Task Performance	6 objects to find	Understanding
Cultural Understanding	6 questions x 3 virtual environments (learn by observing, conversing with bots, activity) Which VE most challenging to explore, find or change?	Preference, demographics, task performance
Presence Survey (rank 1 to 7)	Most: interesting; interactive; related to 'Mayan'; inhabited; in the presence of Mayan culture	Demographics, to task performance; find personal preference in answers, rank 7 VEs
Environmental recall	Shadows; real people; height of locals vs tourists; number of people	Demographics and to task performance and to understanding
Subjective Experience (of time passing)	In which VE did time pass quickest? How fast did they update the screen?	Subjective preference and to demographics



ROBERTO: Next to me you will find the Oval tablet, please click on it.
 ROBERTO: Find your way to the next temple!
 ROBERTO: You missed some information, oh well.
 ROBERTO: Not you again!
 ROBERTO: Find your way to the next temple!
 ROBERTO: You missed some information, oh well.
 PAKAL: Welcome to one of the most important artworks in Palenque.
 PAKAL: Click on the stairs to find out more about them.



Definitions for a human viewpoint

GAME: A challenge that offers up the possibility of temporary or permanent tactical resolution without harmful outcomes to the real-world situation of the participant

NEW MEDIA: the act of reshaping the user experience through the innovative use of digital media.

VIRTUAL HERITAGE: convey the appearance, meaning, significance, and social agency that designed and used cultural artefacts and sites, (through the use of interactive and immersive digital media).

NEW HERITAGE: re-examine the user experience that digital media can provide for the understanding and experiencing of tangible and intangible cultural heritage

CULTURAL PRESENCE: a feeling in a virtual environment that people with a different cultural perspective occupy or have occupied that virtual environment as a 'place'.

Erik Champion, in Y. E. Kalay, T. Kvan, & J. Affleck, *New Heritage: new media and cultural heritage*. New York: Routledge, 2008.

Cultural *ly Significant* Presence



a visitor's overall subjective impression when visiting a virtual environment that people with a different cultural perspective occupy or have occupied as a place... not just a feeling of being there but also a sense of being in a foreign time or not-so-well understood place.

- "In his book *Critical Gaming* (2015), Erik Champion argued that virtual realities should express 'cultural presence,' the meaning and significance of a time, place, or object to people of the past.
- Hyper-reality, photogrammetry, and ever-increasing levels of 'accuracy' in 3D models do not inherently convey aspects of **cultural significance** and meaning, and many VR/AR/XR experiences fall dramatically short of the goal of expressing the importance of past places and things to their original communities.." CAA2022
Oxford

PWP 2001 > 2011 > 2023 reflection

1. Internet-3D worlds for tourism feasible?
2. Where are past 3D projects/case studies?
3. Culturally *significant* presence
4. Games are challenges? *Archaeogaming*?
5. Performance <> understanding
6. Don't use Likert? Extrapolate understanding?
Teach aloud method?
7. AR, MR, XR not well applied to CH
8. Immersive literacy (don't read and walk)





SAVED BY \$ In Gaming? (2022)

2014: Microsoft buys Minecraft for. 2.5B
[[slashgear](#)]

2021: Unity buys Weta Digital [NZ] for 1.65B [[awn](#)]

2021: Facebook spends 10B on Metaverse [[yahoo](#)]

2022: Microsoft buys Activision for 68.7B USD [[afr](#)]

2021:

- Microsoft most valuable “game” comp. 1.99 trillion
- Tencent 400B*, Sony 100B, Unity 13.29B, Ubisoft (Assassin’s Creed) 5.39B
- Epic (Unreal) raises 2B [[companiesmarketcap](#)] and says its value is 31.5B [[Epic](#)]
- \$300B USD in world [[accenture](#)], 2.7B gamers

AUSTRALIA PLAYS 2023

75% 
of Australians play
video games with others

Australian video
game players' top
genre choices:



91% 
of parents play
with their children to
connect as a family

94%  UP FROM 92%
of Australian households have a
device for playing video games

In games, Australians enjoy...

92% **81%** **59%**



...achieving ...exploring ...socialising with others



81%  UP FROM 67%
of all Australians play video games

48%  UP FROM 46%
FEMALE
more women and
girls are playing than
ever before

35  UP BY 3 MONTHS
YEARS
the average age of video
game players in Australia

Australians play
video games to...

...have fun



93%

...improve
mental health



70%

Of adults
who play
video games...

65%
...enjoy making
mini-games and levels

71%
...enjoy building
in them

▶ KEY FINDINGS

▶ AUSTRALIA PLAYS VIDEO GAMES

94% of Australian households have a device for playing video games (up from 92%)

81% of all Australians play video games (up from 67%)

48% of Australian players are female - more women and girls are playing than ever before (up from 46%)

35 years the average age of video game players in Australia (up by 3 months)

79% of players are aged 18 and above

76% of game households have **2 or MORE** devices for playing games

The average Australian who plays video games has been playing for **11 years**

▶ PLAY TO BE WITH FAMILY

92% To spend time together

91% To connect as a family

Most parents say they establish **RULES** for their children's gameplay

▶ PLAY TO CONNECT

75% of Australians play video games with others

33% made new friend(s) through video games

Only **25%** say they always play solo

19% enjoy playing with their spouse or partner

17% enjoy playing with a friend

14% enjoy playing with their children

42% watch YouTube videos of gameplay

▶ PLAY TO LEARN

53% of parents say their children's school use games to teach

90% of adults think games can help students learn science and reading

76% of adults think games inspire students to be creative

74% of adults think games help students manage stress

89% of adults think games improve thinking skills for players of all ages

A **QUARTER** of adults say they have used training games in their workplace

Over **HALF** say they want to use games instead of other types of training

Systemic discrimination

<http://killscreendaily.com/articles/parable-polygons-teaches-us-danger-and-power-individual-bias/>

[Escape from Woomera](#)

This is a story of how harmless choices can make a harmful world.

These little cuties are 50% Triangles, 50% Squares, and 100% slightly shapist. But only slightly! In fact, every polygon *prefers* being in a diverse crowd:

DRAG & DROP THE UNHAPPY POLYGONS

reset

You can only move them if they're unhappy with their immediate neighborhood. Once they're OK where they are, *you can't move them until they're unhappy with their neighbors again*. They've got one, simple rule:

"I wanna move if less than 1/3 of my neighbors are like me."

Elika, why do you look so sad?

Elika:
Oh Mustafa! I was reading from the Koran just before, and one of the guards came up and demanded to look at it. When he finished leafing through the pages, he threw it on the ground instead of giving it back to me.

Press [1] What did you do?

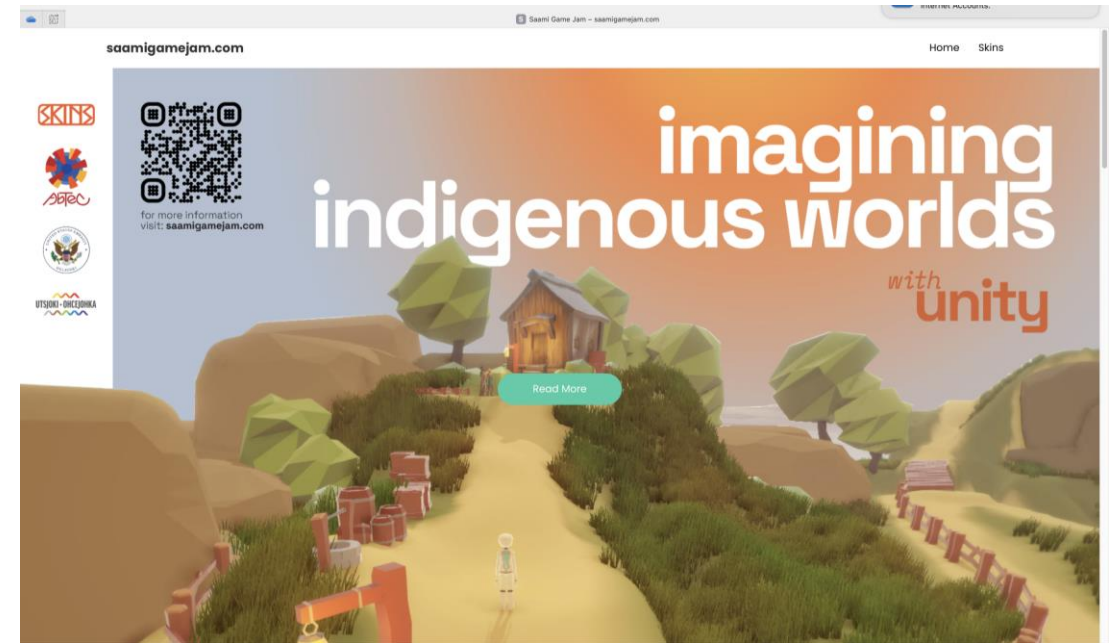
Press [2] That's terrible, but only to be expected in this place.

[Return to Escape from Woomera](#)

Work with communities

Sustaining intangible heritage through video game storytelling - the case of the Sami Game Jam

“This article explores how game jams, a rapid collaborative game production format, can work to support the revitalisation of Indigenous self-narratives in the context of Sámi culture.”



<https://saamigamejam.com/>

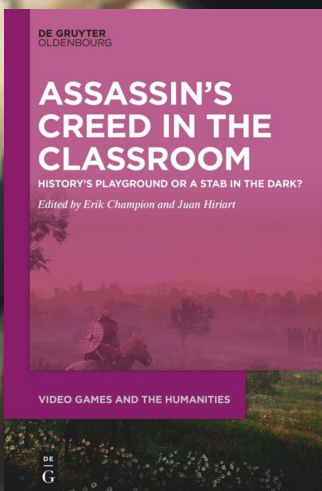
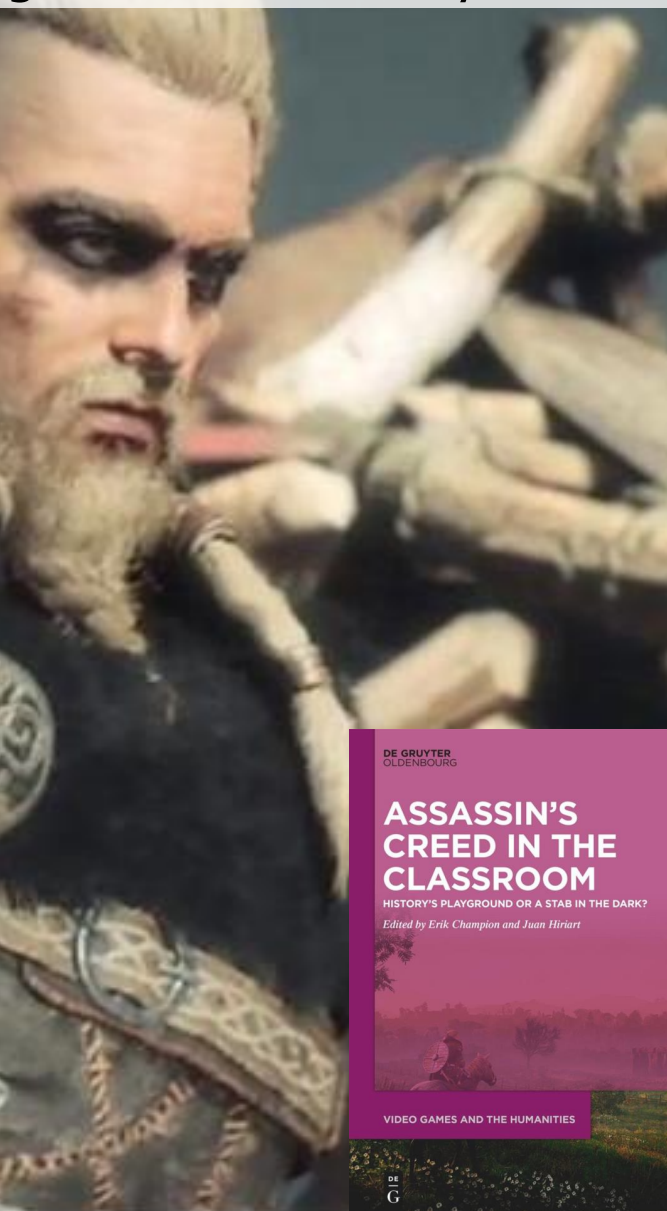


<http://neveralonegame.com>

Discovery Tour Viking Age: Can video games teach history?

Increasing interest in film →		
Serendipitous Film Tourist	General Film Tourist	Specific Film Tourist
<ul style="list-style-type: none"> those who just happen to be in a destination portrayed in a film 	<ul style="list-style-type: none"> those who are not specifically drawn to a film location but who participate in film tourism activities while at a destination 	<ul style="list-style-type: none"> those who actively seek out places that they have seen in film
Motivations include: <ul style="list-style-type: none"> social interaction novelty 	Motivations include: <ul style="list-style-type: none"> novelty education nostalgia 	Motivations include: <ul style="list-style-type: none"> self-actualisation pilgrimage self-identity fantasy romance nostalgia
Increasing self-actualisation motivations →		
Decreasing importance of authenticity →		

[Tourism Review Volume 73 Issue 2 Video game-induced tourism: a new frontier for destination marketers](#)



The Riddles of the Sphinx Tour, Pyramids of Giza, Egypt, as shown in Ubisoft's Assassin's Creed: Origins Discovery Tour.

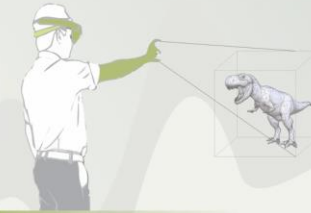


<https://www.bbc.com/news/av/technology-58967120>

<https://www.ubisoftescapegames.com>

AR/MR/XR

Personal AR/VR for Cultural Heritage



MICROSOFT HOLOLENS
 13+
 AUS 4300-4500.
 + No extra device

Group A

- Gesture
- Speech
- Gaze
- Inertial Measurement Unit (IMU)
- No wires
- Indoor
- Outdoor
- See-through HMD
- Spatial sound
- Freedom of movement

FOVE VR
 AUS 780-800
 + PC (VR ready)



PLAY STATION VR
 12+
 AUS 420-450.
 + PlayStation Device

HTC VIVE
 14+
 AUS 780-800.
 + PC (VR ready)



Group B

- Gaze
- Position detection (optical/IR)
- Hand-held controllers
- Inertial Measurement Unit (IMU)
- Indoor
- Outdoor
- In-built HMD
- Wire connected

OCULUS RIFT
 AUS 520-530
 + PC (VR ready)



SAMSUNG GEAR VR
 13+
 AUS 70-90.
 + Smart Phone



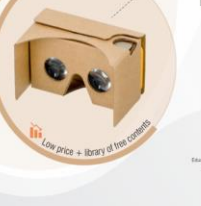
Group C

- Use phone's display
- Phone's Inertial Measure Unit
- No wires
- Indoor
- Outdoor

BOBO VR
 AUS 70-80
 + Smart Phone



GOOGLE CARDBOARD
 6/A
 AUS 20-30.
 + Smart Phone



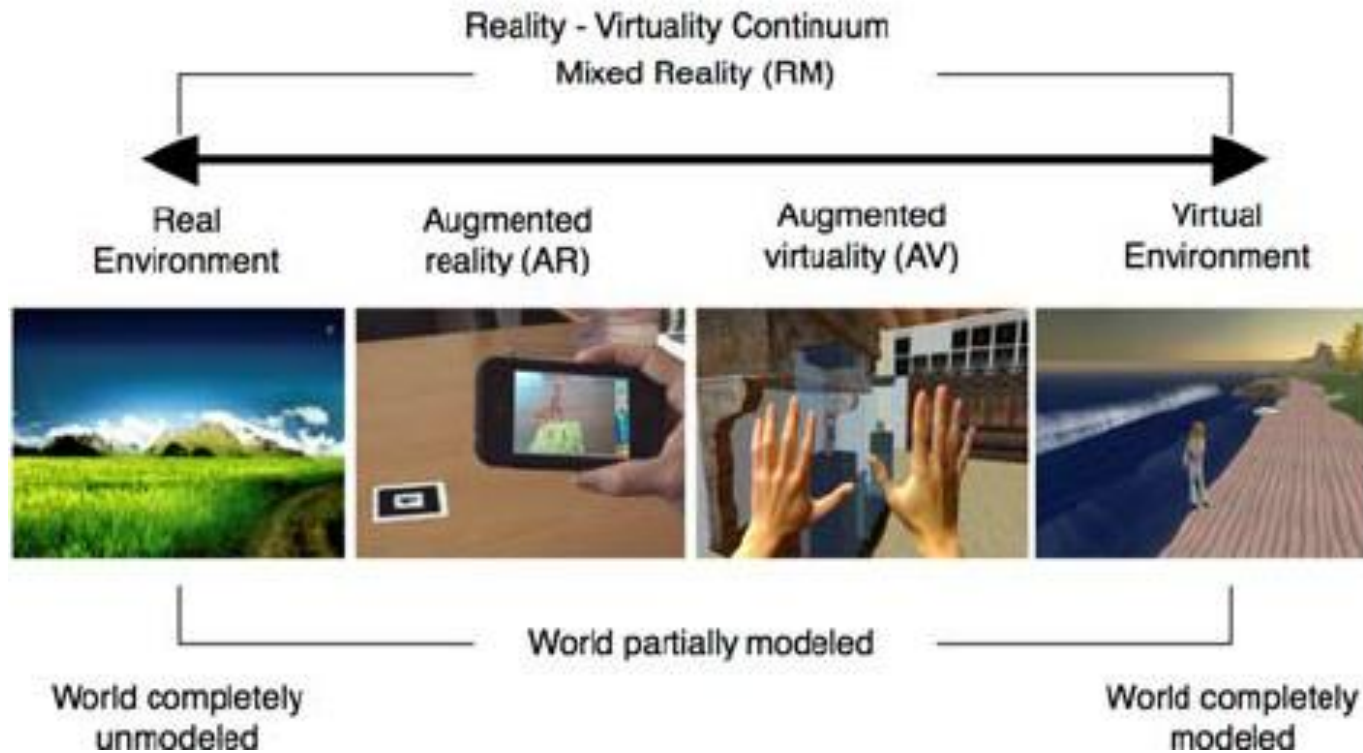
Note:
 6A Under adult guidance. Consult device manual.



Prepared by:
 Erik Champion, Hafizur Rahman, Mafkereseb Bekele

MR: Paul Milgram and Fumio Kishino (1994) define it as
“a particular subclass of VR related technologies that
involve the merging of real and virtual worlds.”

<https://marknb00.medium.com/what-is-mixed-reality-60e5cc284330>



[Milgram Takemura Utsumi & Kishino \(1994\)](#)

Giovanni Vincenti

<https://alisonjamesart.com/2017/03/12/what-is-a-virtuality/>



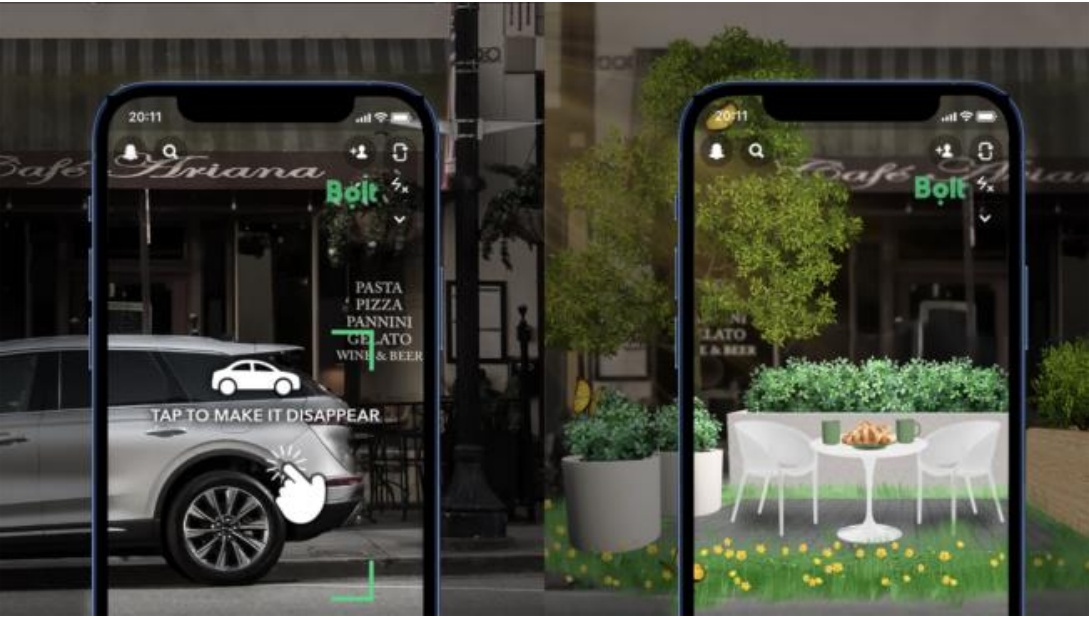
AR: "Layered"



AR: "Embedded"

Do people care?

AR Creation tools

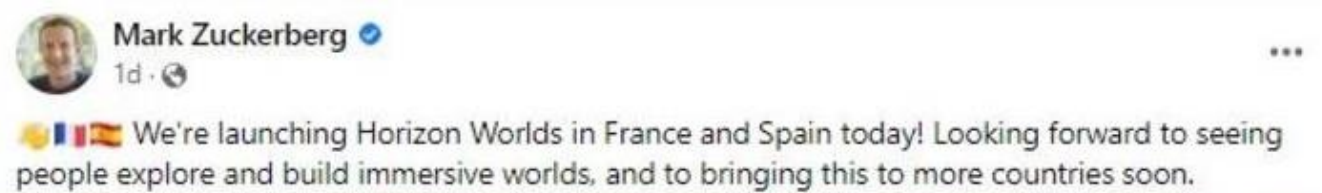


[Bolt's AR Snapchat lens transforms cars into green spaces, outdoor cafes ..](#)

[IOS17 AR Code Object Capture App](#)



Metaverse /AI



ARTIFICIAL INTELLIGENT HISTORY?



Antti Ilvessuo: "correspondences exchanged among members of the Paston family and their acquaintances between 1422 and 1509. "

"Before the AI era, this process would have taken months to extract and plan. Now, it can be done in practically under 1 hour."

Maxime Durand: "It is very very interesting how fast something can be tested. From an historian's perspective, these images are quite problematic. On one end they feel so realistic and make history alive, unlike disconnected forms of arts of communication that we can hardly relate to!"



Mark Zuckerberg  1d · 

  We're launching Horizon Worlds in France and Spain today! Looking forward to seeing people explore and build immersive worlds, and to bringing this to more countries soon.



Good VR news?

 **Nathie**  · Sep 24, 2023
[@NathieVR](#) · [Follow](#)

What opinion about VR do you have that'll get you like this?



 **Flame Soulis** ([@flamesoulis@meow.social](#))
[@FlameSoulis](#) · [Follow](#)

Social VR is ruining VR experiences because people would rather spend time there than try something new. In turn, the industry sees the sales figures and feels less inclined to support the platform. Additionally, headsets that perform well but lack social VR support get shunned.

9:51 AM · Sep 24, 2023



AI is an existential threat – just not the way you think

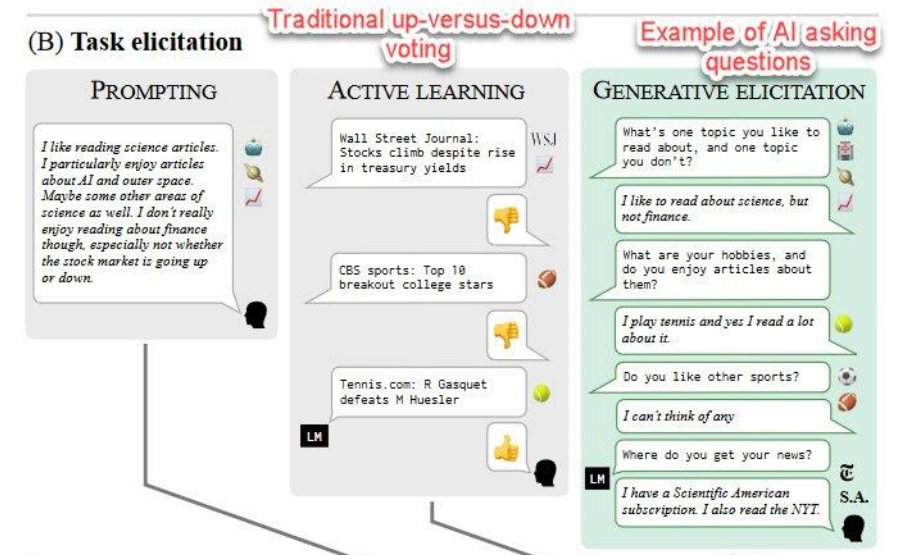
- <https://theconversation.com/ai-is-an-existential-threat-just-not-the-way-you-think-207680>
- “...people will gradually lose the capacity to make these judgments themselves. The fewer of them people make, the worse they are likely to become at making them...But the increasingly uncritical embrace of it, in a variety of narrow contexts, means the gradual erosion of some of humans’ most important skills. Algorithms are already undermining people’s capacity to make judgments, enjoy serendipitous encounters and hone critical thinking.”

Li et al (2023). ELICITING HUMAN PREFERENCES WITH LANGUAGE MODELS <https://arxiv.org/pdf/2310.11589.pdf>

(A) Unknown user preferences



(B) Task elicitation



(C) Evaluation on test cases

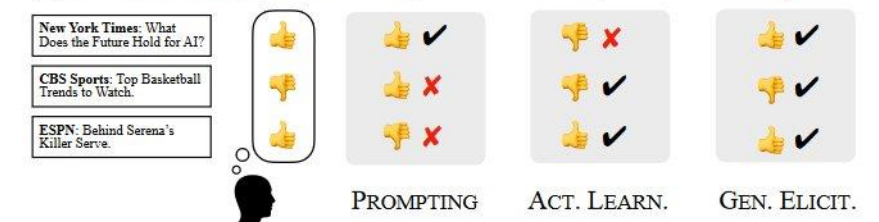


Figure 1: Generative Active Task Elicitation (GATE) elicits user preferences through interactive, free-form questions, which can then be used in downstream decision-making. Unlike non-interactive elicitation approaches (e.g., prompting), which rely entirely on the human to elucidate their preferences, generative elicitation is better able to probe nuances of human preferences. Unlike active learning approaches, generative elicitation can ask more generic, free-form questions. The three parts of this figure illustrate: (A) Fuzzy user preferences: A user wishes to translate their fuzzy preferences for how a task should be performed into a specification for a machine learning model. This is challenging because users lack perfect introspection, preferences can be difficult to specify in language, the specification needs to anticipate tricky real-world edge cases, and models may misgeneralize from provided examples or instructions. (B) Task elicitation: We consider various ways of eliciting these fuzzy preferences from users, including non-interactive prompting, active learning, and generative elicitation (GATE). (C) Evaluation: We evaluate methods on a held-out test set, scoring how well a

Editorial: Is Facebook Going Meta?

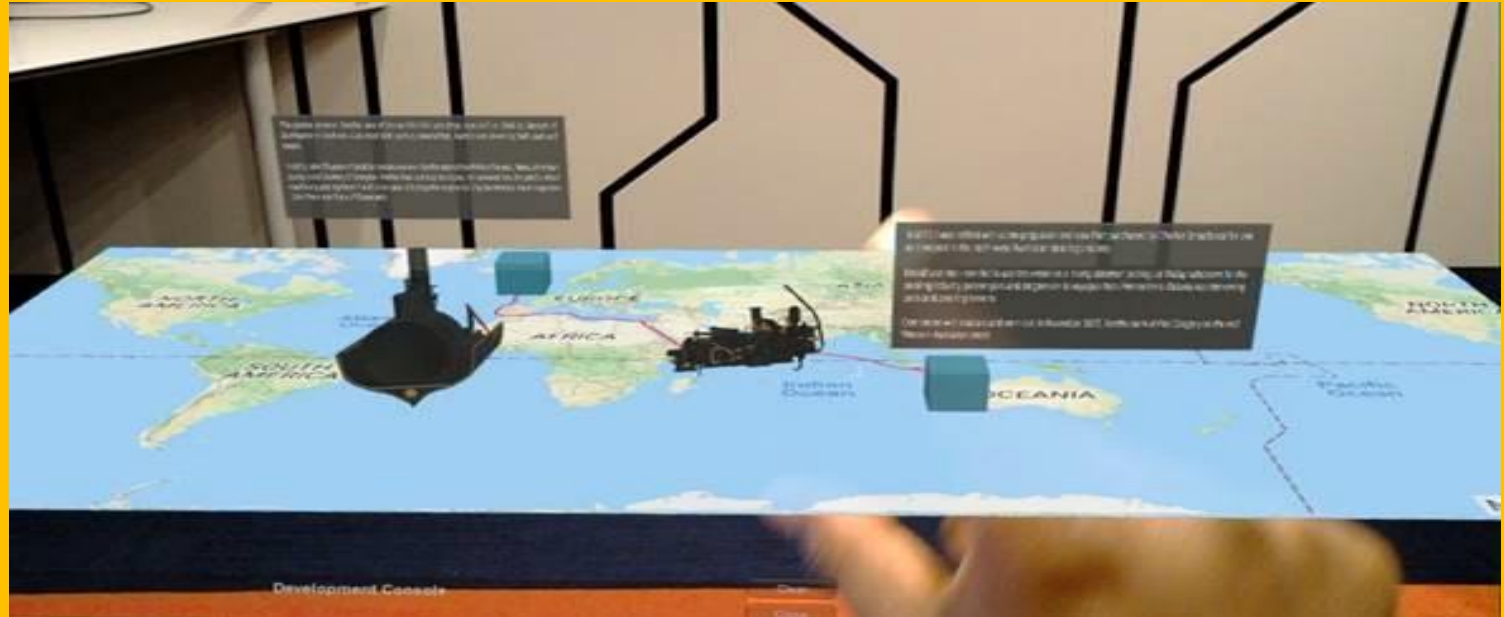
- “To understand how different the world might be in 5 or 10 years’ time, ask yourself questions like these:
- Do you want any person at any time to be able to pull up your Facebook profile just because they saw your face?
- Would always-on face-recognition technology change how you behave in public?
- Does the ability to record your perspective include the right to permanently save, analyze and share the location, actions, conversations, and appearance of the people you see?”

[Ian Hamilton](#) **October 20, 2021**

<https://www.newyorker.com/culture/infinite-scroll/facebook-wants-us-to-live-in-the-metaverse>



Learning from student projects





TOUCHSCREEN TAOISM MASTERS: LI WANG



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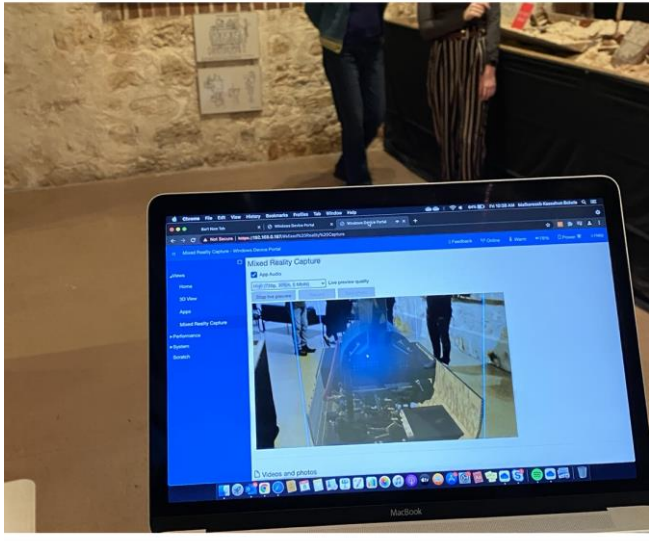
“HUA”
REPRESENT BRUSH PAINTING
IN THE “FOUR ARTS”

INSTRUCTION

PLAY GAME

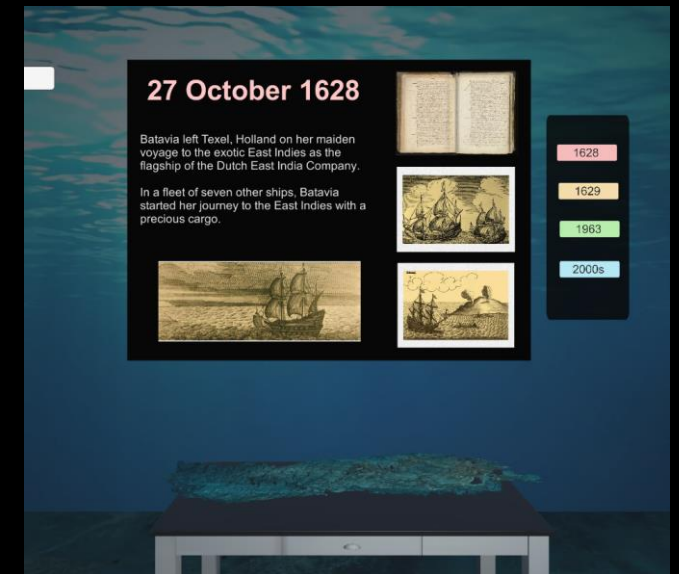
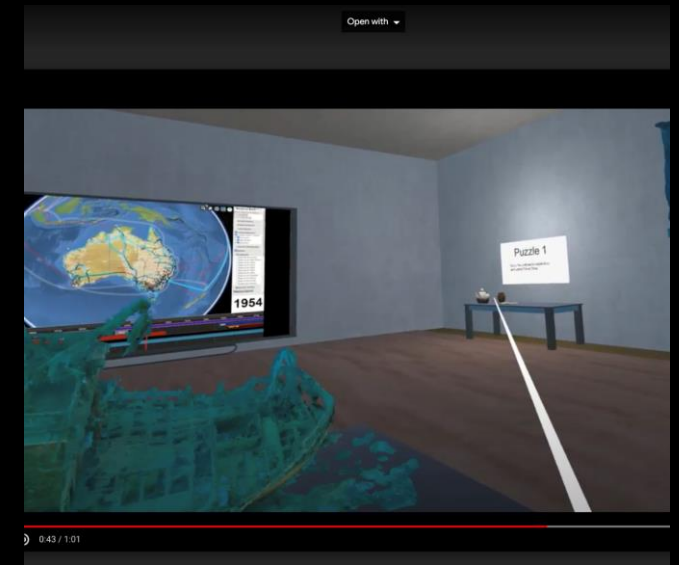


Mixed reality: 1606* Duyfken, PhD: Mafkereseb Bekele



HoloLens-Collaboration WA Shipwrecks Gallery (PHD MAFKERESEB BEKELE

Related projects



Virtual Museum Template in Unity (Desktop, Headset, for curators to build their own multimedia wall collections

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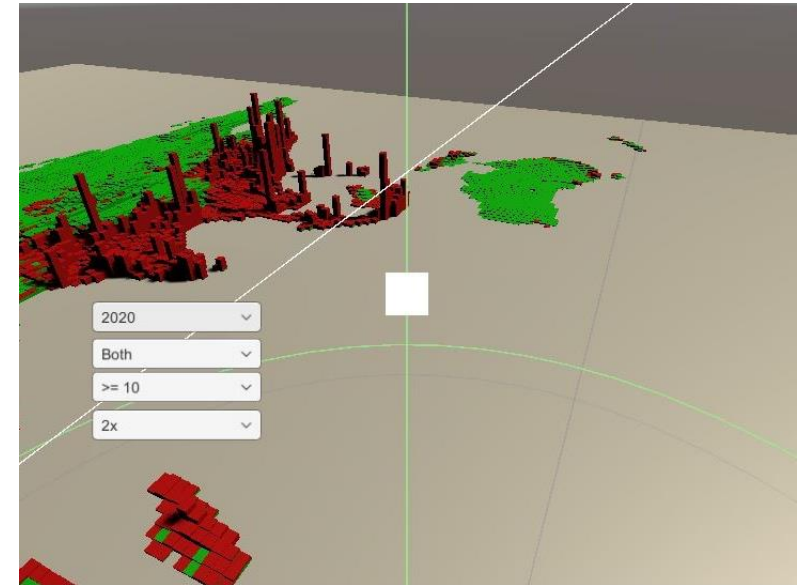
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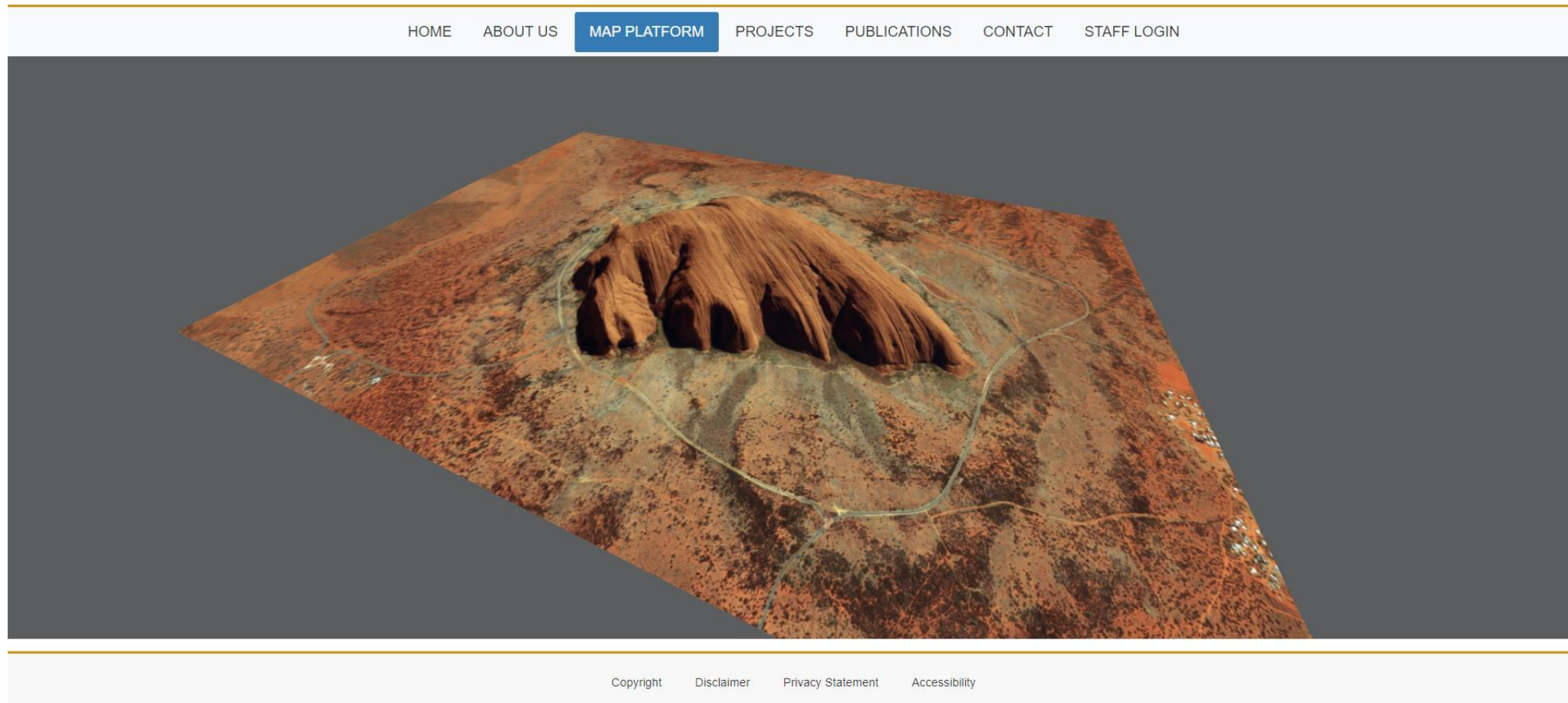
The screenshot shows an ArcGIS StoryMap interface. On the left, there is a vertical text column. The main area is a map of Western Australia with a travel route marked by green and orange dots and lines. A pop-up window titled "(1 of 2) Day 10. Yarraging" is open, displaying the date "4/26/1869" and a description: "Travelled in about the direction of North 73 degrees East magnetic for twenty-eight miles. We reached Yarraging, the farthest station to the eastward, belonging to Messrs. Ward and Adams, where we bivouacked for the night." Below the map is a "timeline" slider for the period "April 17th - August 6th, 1869".



The screenshot shows a Google Tour Builder interface. The main area is a map of Western Australia with a travel route marked by red and green pins. The interface includes a search bar, a map control, and a list of tour stops. The text "Google Tour Builder vs ArcGIS StoryMaps vs TimeMapper" is visible at the bottom.

TLC Cultural Mapping-LOD

Opportunities: geospatial, history, architecture



For his PhD [Ikrom Nishanbaev](#) created a 3D model/GIS database: draw around 3D objects and dynamically change the geodata.

Data + 3D Models on DBpedia (database for Wikipedia) dynamically linked at component level using Linked Open Data.

CulturalHeritageSites

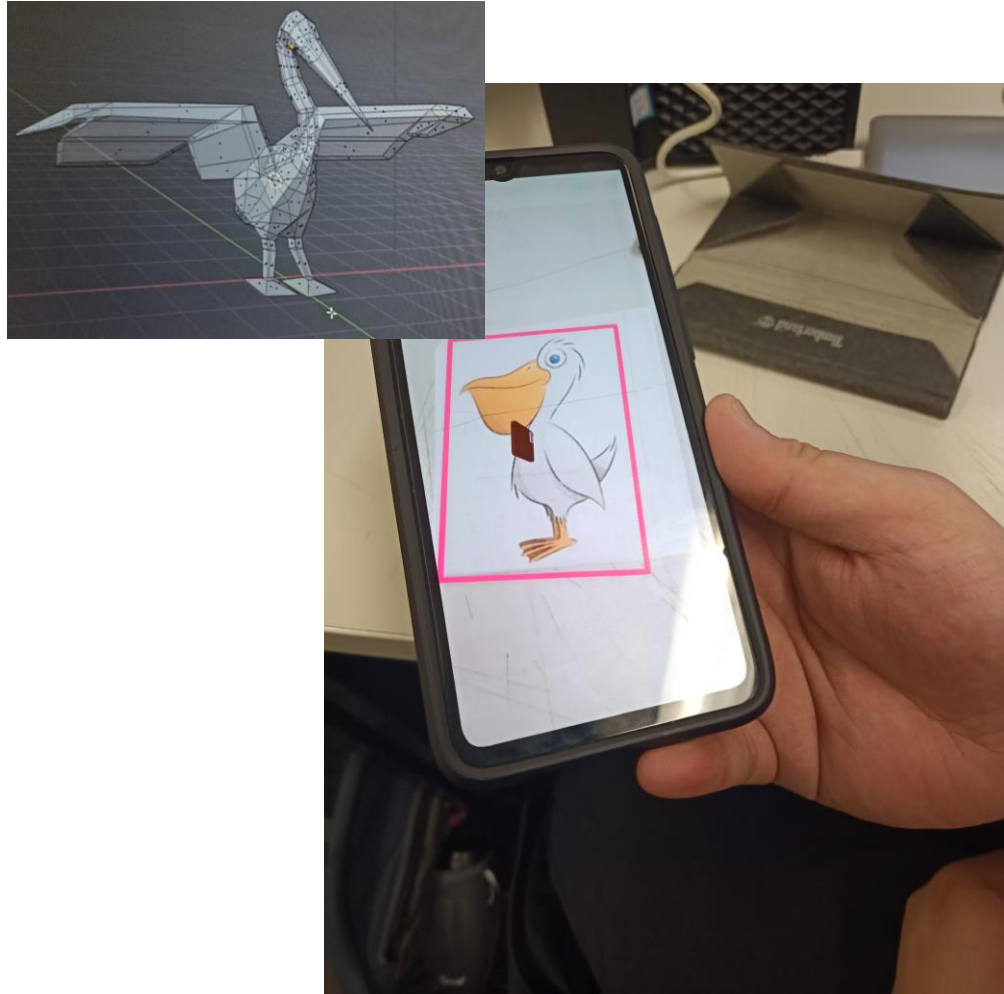
Cultural Heritage Sites : maps, 3D models, GIS data, semantic web, geospatial semantic web.

[View details](#)

Workshops



Creating a Simple Game



<https://www.sea.museum/>

1. What is the goal? Why try to achieve it?
2. Why is it an engaging challenge?
3. Does it involve competition/mastery, chance, imitation, controlling vertigo/rush of movement/flight?
4. What is the feedback system, affordances + constraints, rewards and punishments?
5. How to level up/advance via mechanics?
6. How does it offer different strategies, options?
7. What is learnt during or after the experience?

Easter Island's famous moai statues slowly fading away

Rapa Children

... de un ...
... de Rapa Nui ...
... la fiesta ...
... en el ...
... yendo a ...
... de del final, pero ...
... terminan de ...
... las ...
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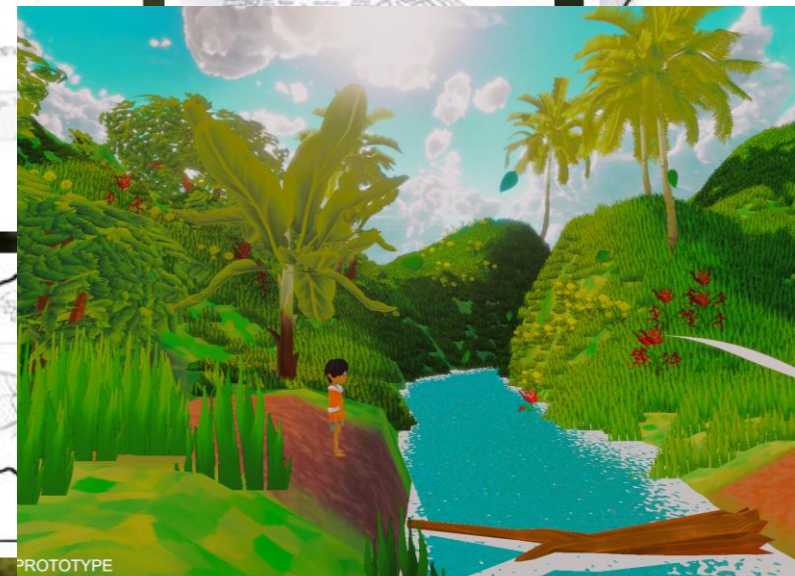


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<https://padlet.com>

<https://milanote.com/>



Rapa Nui

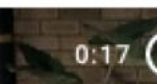
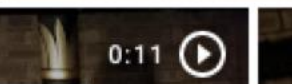
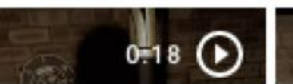
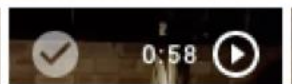
University of Salford



**Ancient Egyptian Maths
as an Escape Room**



Some assembly required



**Solve maths puzzles to win pyramid-building
constructions**



2020

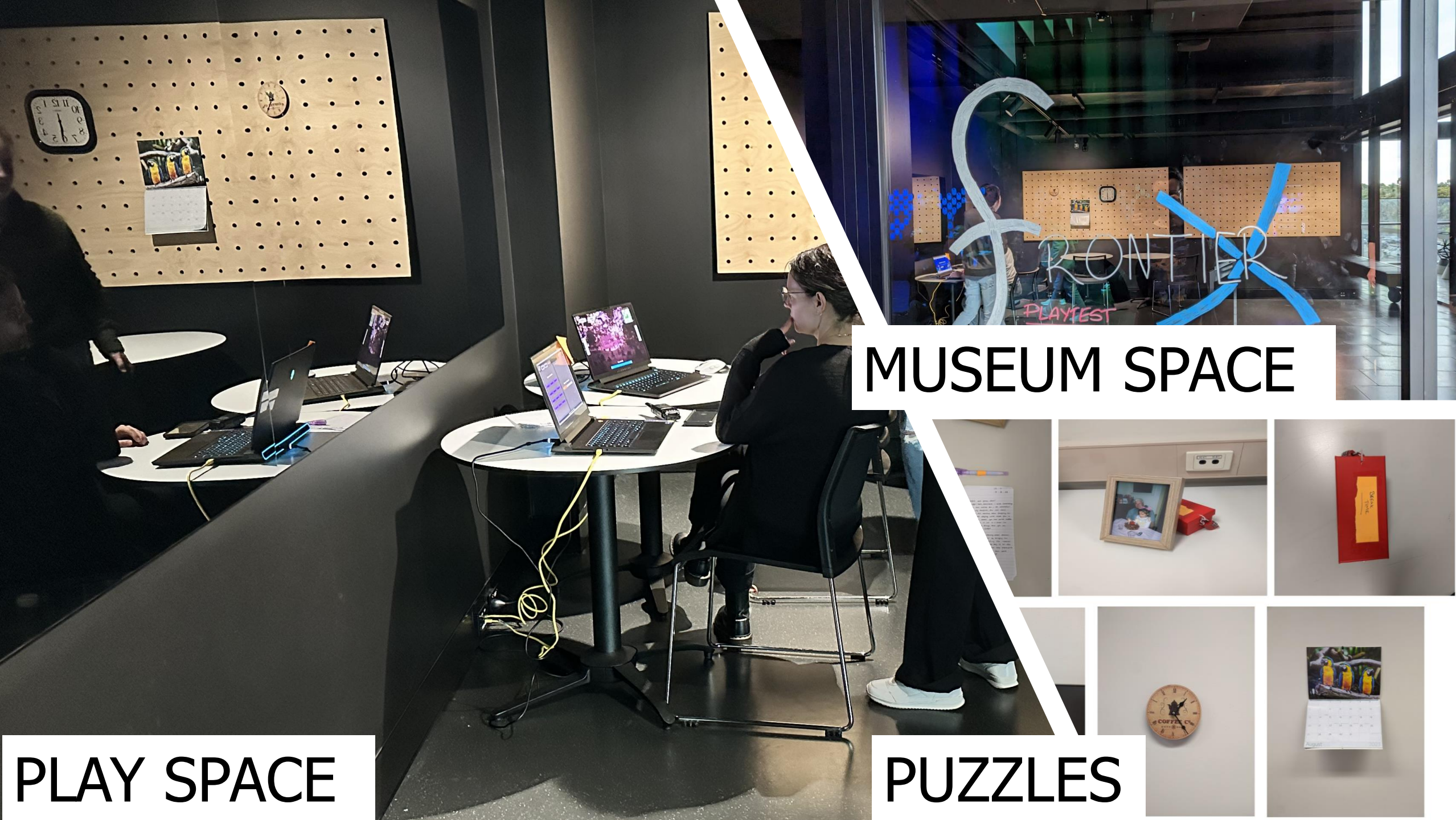


Hybrid Analogue Escape rooms



2023: 3rd year game jam class (using UNREAL)





MUSEUM SPACE

PLAY SPACE

PUZZLES

GLAM Games event (25 Sept)

- Erik Champion (UniSA) Learning Through Play
- Peter Tattersall (Head of Visitor Engagement, National Maritime Museum Sydney) What are you playing at? Contested histories, video games, classrooms, and museums
- Dr Melissa Rogerson (University of Melbourne) Avoiding “analogue” - combining physical components with technologies to make new playful experiences
- Dr Bernardo Pereira (ANU) Insights from a Computer Science Escape Room Experience
- Drs Terhi Nurmikko-Fuller & Katrina Grant (ANU) Lo-fi Games in GLAM
- Dr Susannah Emery, George Martin & Sophia Booiij (UniSA) "Escaping the classroom" - engaging students with history
- Natalie Carfora & Claudia von der Borch (MOD. Museum) Designing Museum Experiences: Learnings from George Alexander Foundation Fellowships
- Peter Tullin (REMIX) The changing landscape for the cultural and creative industries
- Sam Haren (Sandpit) Bringing Intimacy Back to Digital Interactions
- Dr Juan Hiriart (the University of Salford UK (virtual)) Co-designing indigenous games: South America and beyond



<https://www.sea.museum/>



Immersive exp vs museums



Light ADL

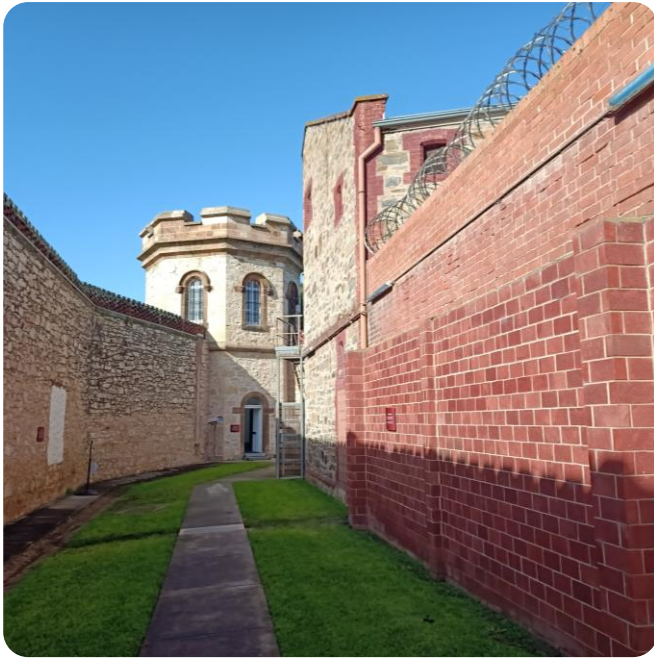


expert cognitive walkthrough



Social Media Followers (000)	Instagram	Facebook	TikTok	Combined
<i>Leading Immersive Entertainment Providers</i>				
teamLab	655	205	12	872
Meow Wolf (Multi-Site / Multiple Accounts)	769	654	149	1572
Secret Cinema	154	429	2	585
CultureSpaces (Atelier Des Lumieres & other sites)	300	681	12.6	994
Museum of Ice Cream	534	101	11	646
Grande Experiences (The LUME)	46	27	0.6	74
<i>Leading Museums & Galleries (Melbourne & Sydney)</i>				
NGV	439	259	No presence	698
ACMI	44	81	No presence	125
Museums Victoria (Melbourne Museum, Scienceworks & Immigration Museum)	106	253	No presence	359
MCA	149	144	No presence	293
Australian Museum	52	103	0.2	155

Peter Tullin slides, Founder, REMIX



PhD scholarship: Personalizable Augmented Heritage Tours

- VR/AR Project with Adelaide Gaol. Evaluate effects of AR/VR heritage tour:
 - which cues heightened emotional engagement?
 - level to which they wished to individually filter and personalize the experience?
 - effect of added detail from indirect group interaction, and evidence for if (and how) a VR (Virtual Reality) game can heighten difficult heritage experience more than a desktop digital game?
- Wider impact may be guidelines and recommendations for phone-based AR for difficult heritage tourism experiences.
- Aim: to engage in particular with staff, visitors, and volunteers of Adelaide Gaol.
- <https://unisa.edu.au/research/>
- <https://unisa.edu.au/research/degrees/ - projects>

Conclusion



1. Virtual Heritage = Decision-Makers or Obsolete Expensive Silos
2. Games/playful heritage-open-ended engaging cultural challenges
3. Explore Immersive Literacy as Skill-Training
4. Citizen Heritage through Collaborative Design
5. [Linked Open Data - 3D Open-Ended Visualisation Data, Tools, Strategies](#)
6. Evaluation as Part of the Learning/Building Process

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- [London Charter](#)
- [can video games teach architectural history?](#)
- <https://www.ubisoftescapegames.com/>
- <https://www.meta.com/en-gb/blog/quest/unleash-your-creativity-through-vr-art/>
- <https://www.skillshare.com/en/blog/guide-to-virtual-reality-art-what-it-is-and-how-to-make-vr-art-yourself/>
- [Tiltbrush](#)
- <https://www.washingtonpost.com/video-games/2021/02/04/virtual-reality-future-games/>

Virtual Travel / Metaverse / AI

- <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/tourism-in-the-metaverse-can-travel-go-virtual>
- <https://www-businessinsider-com.cdn.ampproject.org/c/s/www.businessinsider.com/metaverse-dead-obituary-facebook-mark-zuckerberg-tech-fad-ai-chatgpt-2023-5?amp>
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- [“the era of gigantic AI models like GPT-4 is coming to an end”?](#)

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<https://gamestudies.org/2103/articles/toh#>