SPECIES' CITADEL'S TIMELINE: A VIRTUAL REALITY EXPERIENCE IN A PERIPHERAL ARCHAEOLOGICAL MUSEUM

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VISION

ARCHAEOLOGICAL VENUES

Concealed History
Unreachable Artifacts
Untold Stories

TECHNOLOGY

Virtual Guides
Story Telling
VR Experiences

ESCAPE ROOMS

Critical Thinking
Problem-Solving
Creativity

SCT VR

VR Escape-Room Immersive Game

Cutting edge - HTC Vive Technology

Riddle Game

Highlighting artifact Significance

Based on actual Museum

GOALS

IMMERSION

VR technology

HISTORICAL VALUE

Assist learning via carefully designed Riddles

FUN

Users learn through gaming

IMPLEMENTATION

HISTORICAL ANALYSIS

Detailed historical analysis performed for each artifact

3D OBJECT GENERATION

Scanning of selected artifacts & generation of 3D models

Creation of 3D replica of actual museum's building

RIDDLE GENERATION

Riddle creation for artifacts highlighting
Origin
Importance
Usage

PLOT

Creation of a main story & plot via combination of historical/ mythological facts and fictional characteristics for high engagement

RIDDLES

Simple

ARTIFACTS		
3D Object	Artifact	Riddle
	Hercules's Column	Separated in two halves scattered in the play area, that the user must find to unite. Place in the respective pillar, as described by the relevant inscription
	Sacrifice Tombstone & Hades – Persephone Tombstone	Spawned randomly in the play area and have to be placed on respective pillar. Inscription highlights historical importance.
	Market Tombstone	Separated in scattered parts that must be united to reconstruct actual exhibit
	Goddess Demeter & Goddess Athena	Protectors that assist user to face the underworld by providing divine powers

RIDDLES

Complex

ARTIFACTS		
3D Object	Artifact	Riddle
	Lykosoura's Burst	Spawned in play area and must be positioned in relative pillar. Two manly bursts must be rotated to face towards her.
	Athlete and Mother & Family Tombstone	Objects of importance are scattered highlighting the historical significance of artifacts
	Young Girl Statue	Statue's pieces missing highlighting the daily life of children in antiquity
	Cybele Tombstone & Callisto Tombstone	Pieces of importance are scattered highlighting the importance of symbols (divine & household) in antiquity

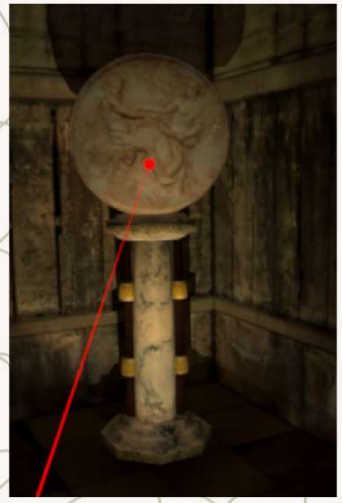
SCT VR

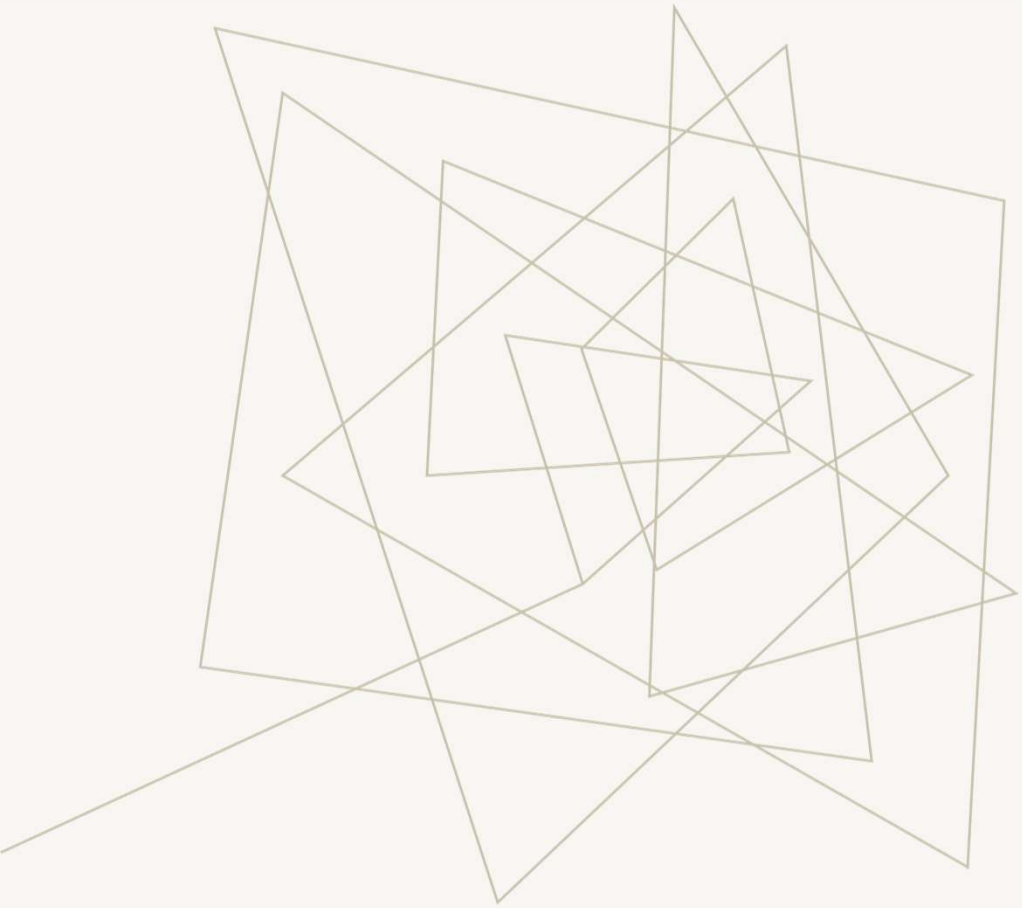
SPECIES' CITADEL'S TIMELINE
A beacon of Hope

OUTSIDE AREA

FIRST ROOM

RIDDLE AREAS





USER STUDY

PARTICIPANTS

UNIVERSITY STUDENTS

4 Males

1 Female

VR TECHNOLOGY FAMILIARITY

Students were volunteered to participate in the play test and provide feedback

DETAILED INFORMATION

Study’s objective & Procedures were explained extensively before joining

PROCEDURE

SINGLE SESSION

Controlled laboratory area

PRE-SESSION

Questionnaire about Demographic information &
Prior experience with VR and Escape Room Games

STC EXPLAIN

Connection to real archaeological venue & artifact significance

Introduced to navigation system

POST-SESSION

Semi-structured interview through open-ended questions
Concerns & Difficulties encountered were addressed and clarified

METRICS

GAME WORLD IMMERSION

Sense of Presence
Realism of artifacts
Environment Interactivity

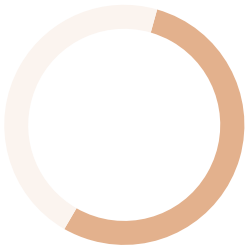
MOTIVATION

VR Escape Room game
Challenging Riddles
Real-World Connection of artifacts

LEARNING

Enjoyment
Engagement
Challenges

RESULTS

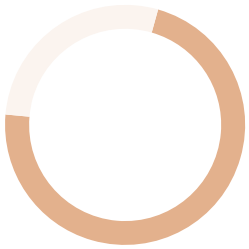


Immersion

"I felt completely immersed in the virtual environment and motivated to solve the riddles”

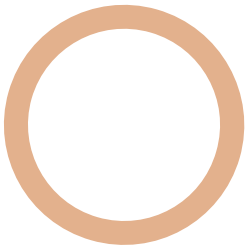
Motivation

“The game sparked my curiosity and I felt connecting to the real archaeological artifacts”



Learning

“The game challenged me to think critically and connect the riddles to the artifacts, depending my understanding of their cultural content”



User Experience

“The game was a fun combination of fun and learning. Puzzles were challenging but also rewarding, providing a sense of accomblishment, making me appreciate the artifacts in a whole new way”

FUTURE WORK

QUANTITATE MEASUREMENT

Learning outcomes derived from the immersive experience needs to further be researched

Pre- & Post- assessments

GAME REUSABILITY

Create extended Artifact Library with pre-scanned artifacts

Adaptability

Multifaceted Approach

DYNAMIC RIDDLE GENERATION

Contextually relevant riddles

Artifact related riddles

Modular puzzle-game

PROCEDURAL LEVEL GENERATION

Unique riddles dynamically generated for each venue

Unique Challenges

Captivating Narratives

THANK YOU

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