January 10, 2025

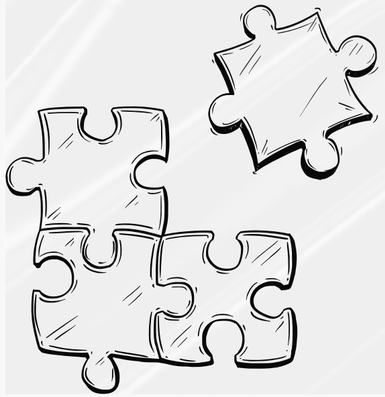
AUGMENTED & VIRTUAL REALITY

PRESENTATION

Group: Smit, Milan, Milankumar

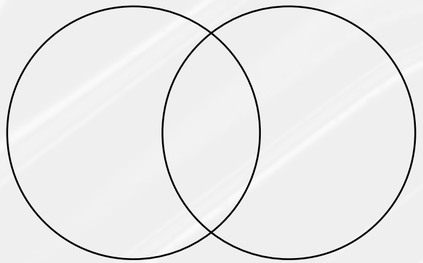

THE FORGOTTEN VAULT
"ECHOES OF HISTORY: UNCOVERING TREASURE IN AR"

GAME CONCEPT RECAP



Embark on a thrilling adventure through ancient palace ruins with three engaging mini-games. Start by piecing together a torn, 2D map to reveal hidden rooms and crucial locations. Then, use augmented reality (AR) to scan the ruins, uncover glowing relics, and gather vital clues. Finally, unlock the treasure chest by solving an interactive AR puzzle, aligning symbols, and manipulating relics to complete your quest and claim the ultimate reward.

PROGRESS HIGHLIGHTS & FIRST USER STUDY RESULTS



Participants:

- Demographics: [e.g., 3 target users, aged 18-30].
- Scope: Tested one minigame.

Quantitative Findings (HARUS):

- Effectiveness: Average score 5.8/7.
  - Participants found it easy to locate virtual treasures.
- Learnability: Average score 5.5/7.
  - Users adapted quickly to AR mechanics.

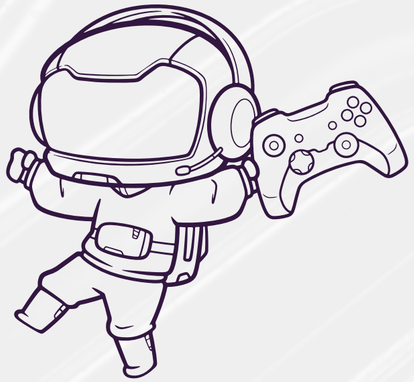
Qualitative Insights:

- What Worked Well:
  - "The treasure hunt is engaging and fun!"
  - Arranging pieces.

Challenges:

  - Difficulty interpreting some clues.
  - Too many map pieces to collect.
  - Somewhere user was getting confused.

USER STUDY 2 OVERVIEW & METHODOLOGY



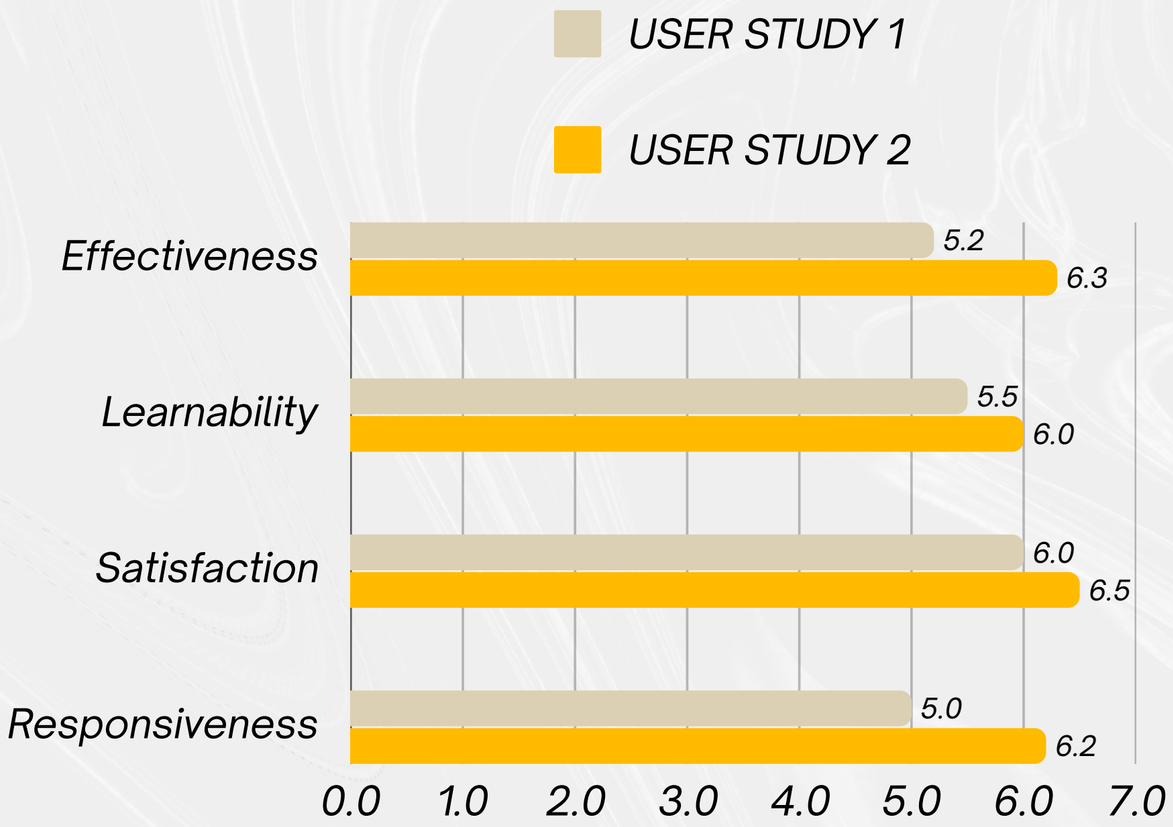
- Past three participants from user-study 1 of age group **16-23 years youth.**

- **Testing Scope:**
  - Expand on the parts of the application tested (e.g., Combined mini-game 1-2 instead of just one minigame).
  - This study was conducted on mobile phone instead of laptop

- **Methodology:**
  - **Survey Tool:** HARUS questionnaire with 7-point Likert scale.
  - **Additional Feedback:** Include qualitative questions to gather detailed user opinions.

- Provide examples of qualitative feedback questions, like:
  - "Which mini-game was more interesting?"
  - "What challenges did you face during the AR game play?"

QUANTITATIVE RESULTS (HARUS SCORES)



Key Observations:
Effectiveness: Higher scores indicate smoother interaction and task completion.
Learnability: Improved gaming experience in mini-game 1 helped users adapt quickly.

QUALITATIVE INSIGHTS

- **Positive Feedback:**
  - "The game is more engaging with better treasure clues and smoother AR tracking."
  - "The added variety of tasks made the gameplay more interesting."
- **Negative Feedback:**
  - A participants suggested additional hints for AR game.
- **Themes Identified:**
  - Improved immersion and usability.
  - Remaining technical issues.

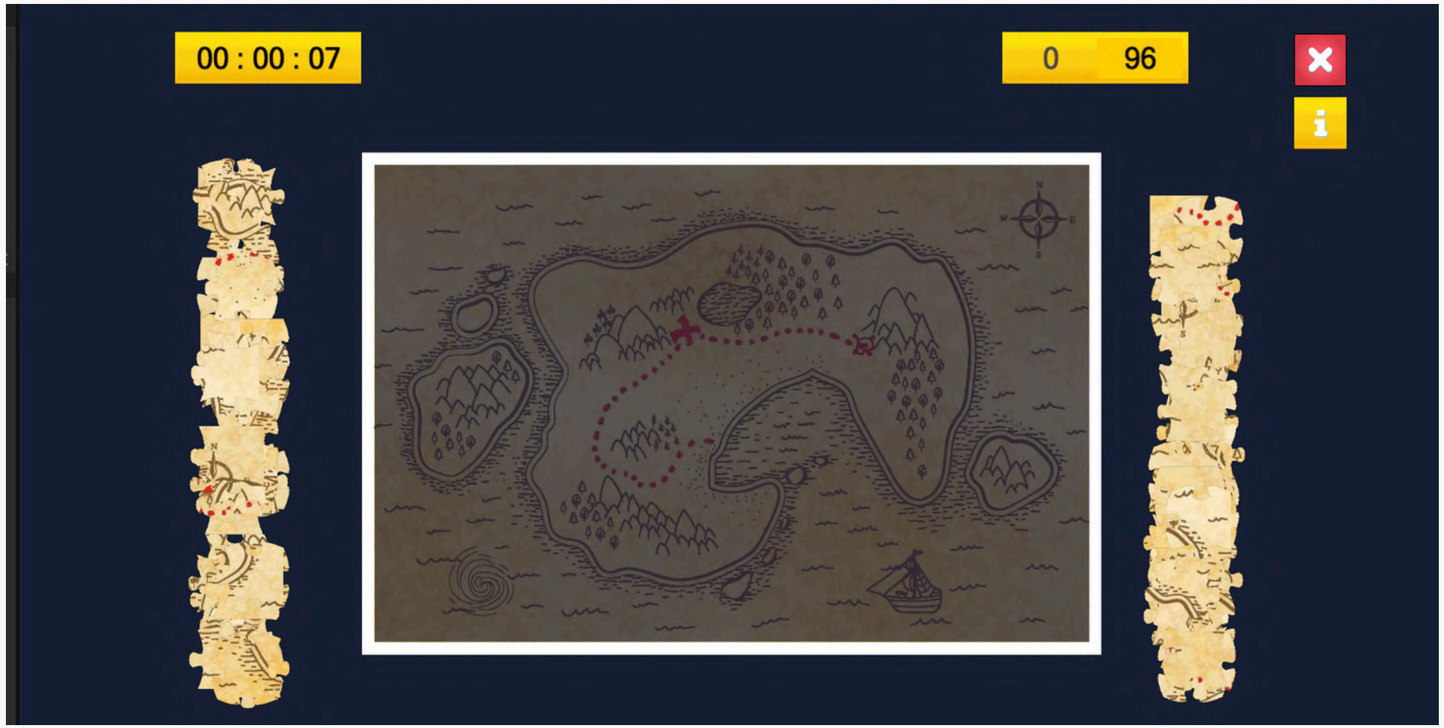
FINAL CHANGES TO MAKE BEFORE DEADLINE

- Completing mini-game 3.
- Creating more engagement, ease of use by (fine-tuning clues, enhancing AR tracking).
- Prioritize improvements that have the most significant impact.
- Adding clarity of instructions.
- Include tooltips for important features during the first gameplay session.
- Make the navigation menu more intuitive.
- Would like to progress in testing the full application.
- If time allows we will try to refine User Interface.

GAME

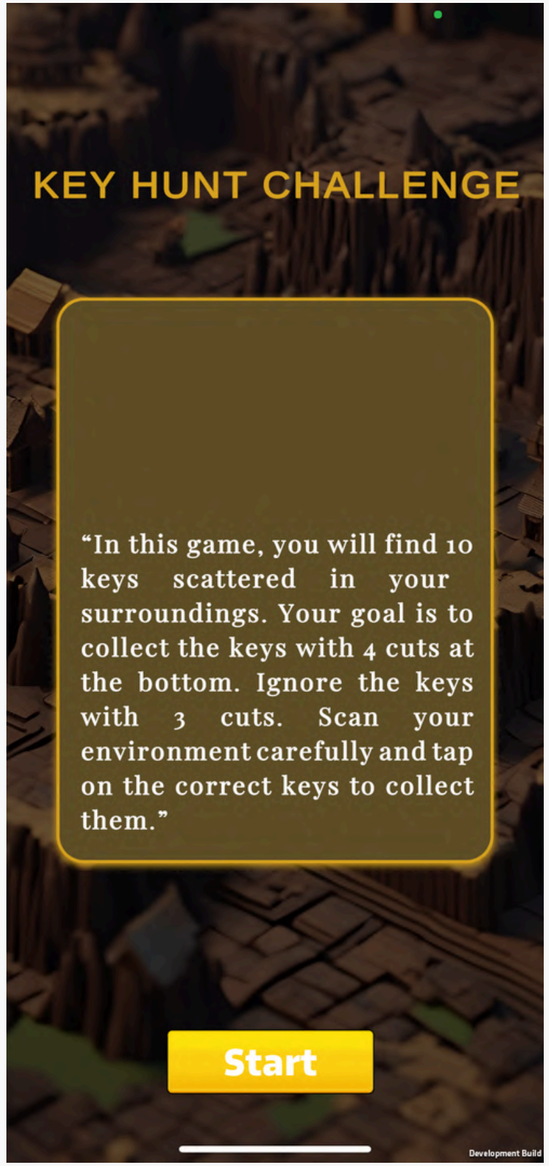
STORY VIDEO

COMPARISON AFTER TESTING




JIGSAW PUZLE GAME
WELCOME TO THE ANCIENT CASTLE PUZZLE!
PIECE TOGETHER THE SCATTERED MAP, UNCOVER SECRETS, AND UNLOCK THE CASTLE'S MYSTERIES.
LET THE ADVENTURE BEGIN.
Start
Development Build


00:02
Development Build


KEY HUNT CHALLENGE
"In this game, you will find 10 keys scattered in your surroundings. Your goal is to collect the keys with 4 cuts at the bottom. Ignore the keys with 3 cuts. Scan your environment carefully and tap on the correct keys to collect them."
Start
Development Build

October: Concept & Initial Development

Concept Finalization, persona, wireframe, Begin Basic Development(Unity setup)

November: AR Mechanics & First Minigame Development

Start building the 2D puzzle minigame, Integrate basic UI, Implement AR scanning and object-tracking functionalities.

December: Advanced AR Development

development of Minigame 2 and Minigame 3, user testing of all minigames,

January: Final Refinements & Testing

Polish UI, improve game mechanics, and optimize AR interactions, Continue user testing to refine gameplay and fix bug.

What went well

- Successful Implementation of Core Features:(Key game mechanic with AR, Interactive minigames)
- Creative Design and Storytelling:
- Learning and Growth

What Did Not Go So Well:

- Time Constraints:
- Technical Challenges: (Never used unity before, Initial difficulties in configuring AR Foundation components)

Development Status Rating

- Overall Development Status: 7.5/10:
- While the application is functional and provides an engaging user experience, it still requires more polishing, optimization, and additional features.

Future Improvements (To Make It a Product):

- Enhanced Graphics and Animations
- Scalability
- Performance Optimization
- Polished UI/UX
- Testing and Feedback

FINAL CONCLUSION

“Creating this AR treasure hunt game has been a rewarding experience, showing how AR technology can make fun and engaging experiences. The game has a strong base, but improving the graphics, performance, and features would help make it a great product for the AR gaming market. The challenges we faced and lessons we learned will help us in future projects.”

Thank You