Test initial gemini détection d'objet avec camera pc

La Tour Eiffel.
1889 (Date d'achèvement et d'inauguration).

Mission et succes criteria

1. Purpose of the project

Mission

The mission of this project is to design an immersive educational application for the Meta Quest 3S virtual reality headset that leverages Virtual Reality (VR) and Artificial Intelligence (AI) to enhance cultural learning.

The application places users inside a virtual museum where they can explore historical monuments and artworks. By interacting with these elements, users are challenged through an AI-generated quiz that evaluates their knowledge and provides immediate feedback. This interactive approach encourages active learning rather than passive observation.
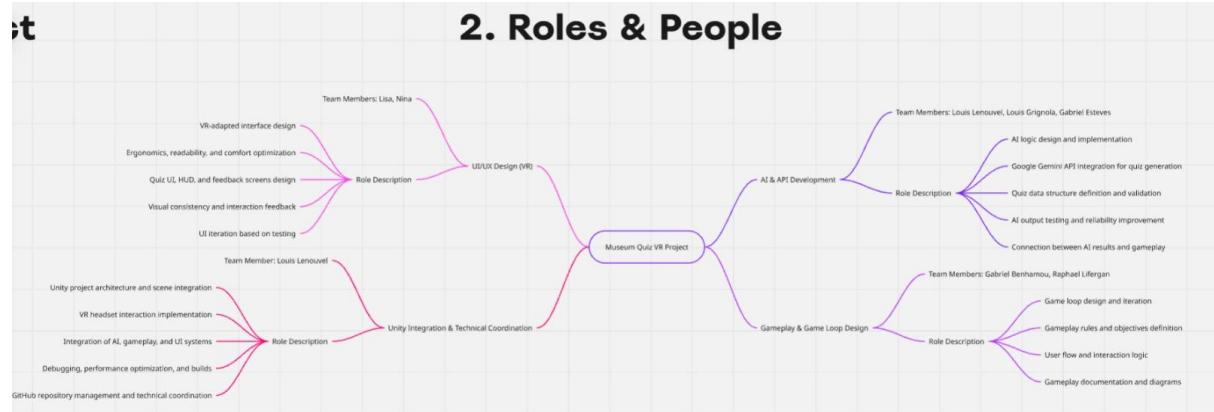
By combining immersive exploration with AI-driven assessment, the project aims to demonstrate how virtual reality can be used as an effective and engaging educational tool, particularly suited for learning history and cultural heritage in a playful and interactive way.

Success Criteria

How can we sense or measure that we are successful?

The project is successful if users can intuitively explore the virtual museum, actively engage with AI-generated quizzes, and learn cultural and historical information through immersive interaction and clear feedback.
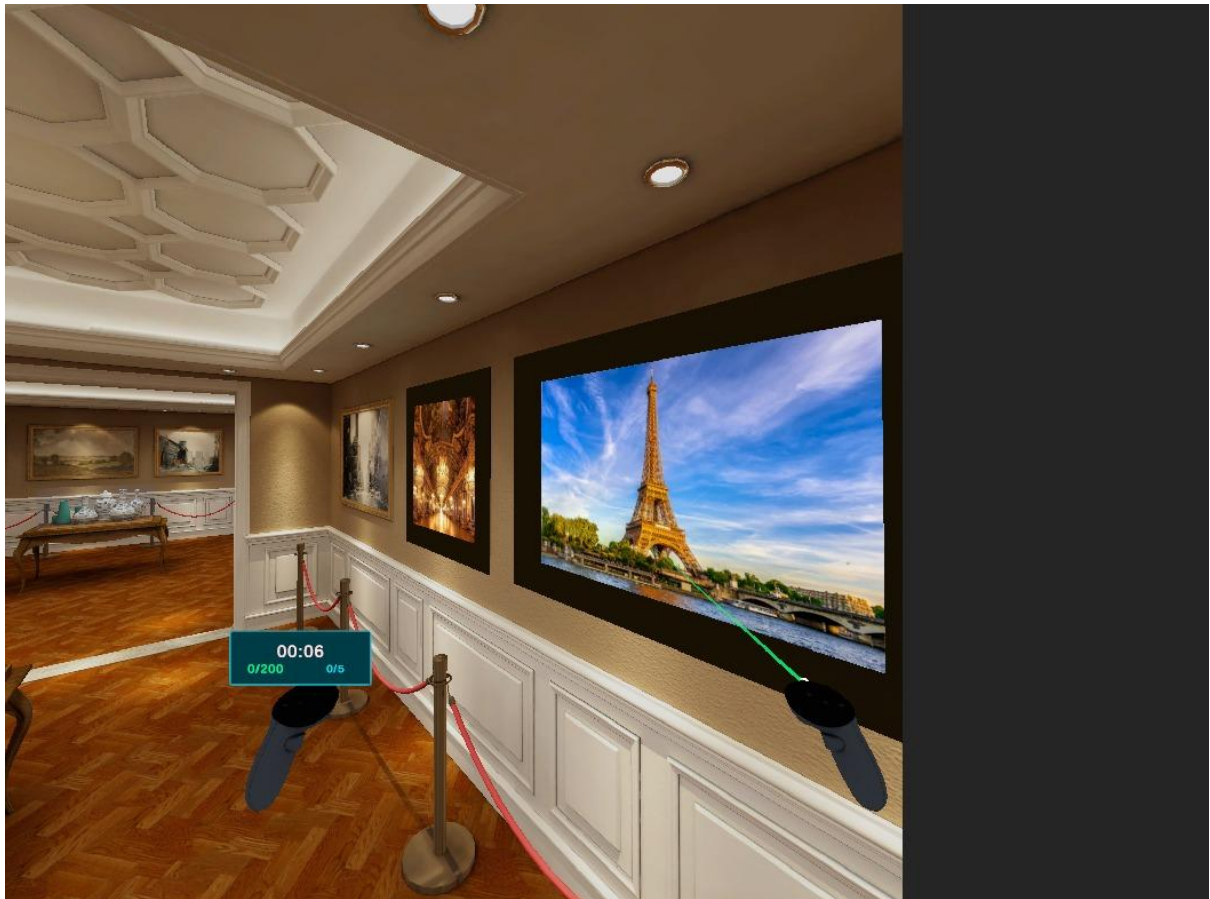
GitHub re

Roles & people

2. Roles & People

Museum Quiz VR Project

UI/UX Design (VR) — Role Description
- Team Members: Lisa, Nina
- VR-adapted interface design
- Ergonomics, readability, and comfort optimization
- Quiz UI, HUD, and feedback screens design
- Visual consistency and interaction feedback
- UI iteration based on testing

Unity Integration & Technical Coordination — Role Description
- Team Member: Louis Lenouvel
- Unity project architecture and scene integration
- VR headset interaction implementation
- Integration of AI, gameplay, and UI systems
- Debugging, performance optimization, and builds
- GitHub repository management and technical coordination

AI & API Development — Role Description
- Team Members: Louis Lenouvel, Louis Grignola, Gabriel Esteves
- AI logic design and implementation
- Google Gemini API integration for quiz generation
- Quiz data structure definition and validation
- AI output testing and reliability improvement
- Connection between AI results and gameplay

Gameplay & Game Loop Design — Role Description
- Team Members: Gabriel Benhamou, Raphael Lifergan
- Game loop design and iteration
- Gameplay rules and objectives definition
- User flow and interaction logic
- Gameplay documentation and diagrams

kanban last week

	Task	Category	Status	+
1	Finalize the museum quiz game loop	Game Loop & User...	Done	
2	Define success and failure conditions	Game Loop & User...	Done	
3	Adjust user progression logic	Game Loop & User...	Done	
4	Adapt interfaces to VR headset ergonomics	UI / UX in VR	To Do	
5	Implement visual feedback for correct and incorrect answers	UI / UX in VR	To Do	
6	Improve UI readability and comfort in VR	UI / UX in VR	To Do	
7	Improve AI answer validation logic	AI Logic	Done	
8	Handle ambiguous or incorrect user inputs	AI Logic	Done	
9	Optimize AI response reliability	AI Logic	Done	
10	Integrate an interactive museum scene in Unity	Unity & VR Integration	In Progress	
11	Connect AI logic to the Unity experience	Unity & VR Integration	In Progress	
12	Implement user interactions in VR	Unity & VR Integration	In Progress	
13	Perform user testing sessions	Testing & Debugging	In Progress	
14	Fix Unity and VR-related bugs	Testing & Debugging	In Progress	
15	Optimize performance and stability	Testing & Debugging	In Progress	
16	Validate overall immersive experience consistency	None	In Review	
17	Review usability and clarity of instructions	None	In Review	
18	Verify interaction flow inside the museum scene	None	In Review	
19	Deliver a functional VR museum quiz application	None	Done	
20	Fully integrate AI with the Unity project	None	Done	
21	Finalize VR-optimized UI	None	Done	
22	Prepare final build for demonstration and evaluation	None	Done	

Kanban first week

	Task	Status	Category
1	Research AI-based immersive use cases	Backlog	Research
2	Explore computer vision applications for education	Backlog	Research
3	Analyze feasibility of AI + VR integration	Backlog	Research
4	Study available VR hardware constraints	Backlog	Research
5	Define team roles and responsibilities	Backlog	Team Management
6	Study Google Vision API capabilities	To Do	AI & APIs
7	Test object recognition using a camera feed	To Do	AI & APIs
8	Explore LLM integration for response analysis	To Do	AI & APIs
9	Define an initial game concept	To Do	Game Design
10	Design a first game loop based on object detection	To Do	Game Design
11	Draft a basic user journey diagram	To Do	Game Design
12	Research VR interface best practices	To Do	UI / UX
13	Analyze ergonomic constraints of VR headsets	To Do	UI / UX
14	Create low-fidelity UI wireframes	To Do	UI / UX
15	Create a GitHub repository	To Do	Integration & Project Setup
16	Define collaboration and branching rules	To Do	Integration & Project Setup
17	Centralize project documentation and resources	To Do	Integration & Project Setup
18	Build an AI proof of concept using camera input	In Progress	AI & APIs
19	Run early tests of object detection	In Progress	AI & APIs
20	Brainstorm project vision as a team	In Progress	Team Management
21	Validate a first AI-based project idea	Done	Research
22	Deliver a functional AI proof of concept	Done	AI & APIs
23	Assign clear technical and design roles to team members	Done	Team Management

miro

Exemple d'interface finale