SERIOUS GAME MECHANICS AND AI FOR ARCHAEOLOGICAL STORYTELLING: A CASE STUDY ON CAMPANIAN HERITAGE SITES

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What if the stones of Pompeii could talk?

I work as a researcher and a PhD student to find out.

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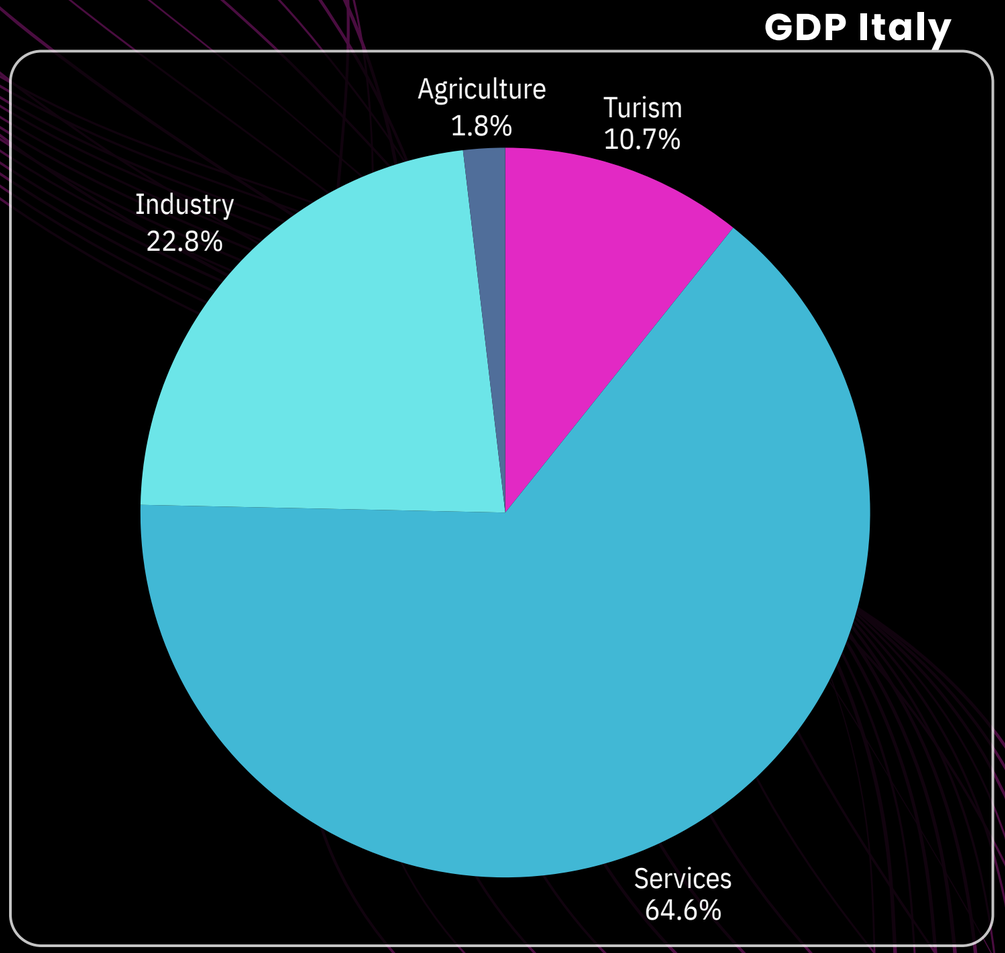
Some Context



Old Ways

Archaeology today is transmitted in traditional ways: through books, tour guides, and on-site visits, information is becoming a luxury in our society.

Vast Territory

From aquatic archaeological parks to entire cities frozen in time, there's a huge territory to explore.

Modernization & Democratization

Implementing new technologies ensures access to famous archaeological sites for a greater number of people and makes lesser-known areas known.

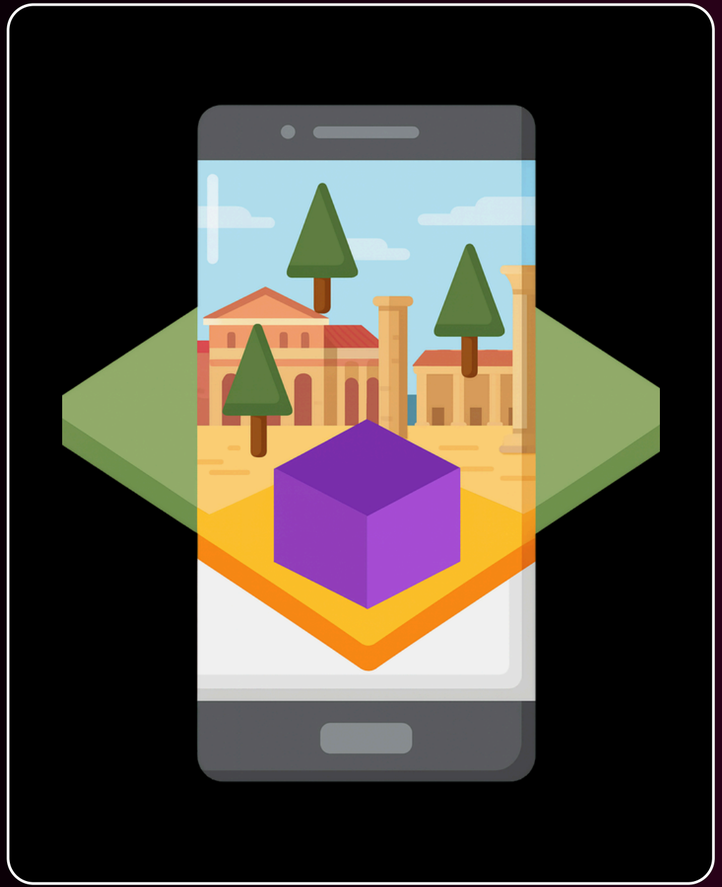
Serious Game Mechanics for Immersive Experiences

Engagement through interactivity:
Game design principles turn visitors into active participants, increasing immersion and attention.

Motivation and retention:
Challenges, rewards, and progression systems sustain curiosity and make learning more memorable.

Immersive digital narratives:
Mechanics like role-play, exploration, and branching dialogues facilitate the design of rich storytelling experiences.

Accessibility for diverse audiences:
Serious games adapt to different visitor profiles, making cultural heritage more inclusive and appealing.



Theoretical foundations

Digital Storytelling

To share an immersive story through technology

Gamification & Serious Games

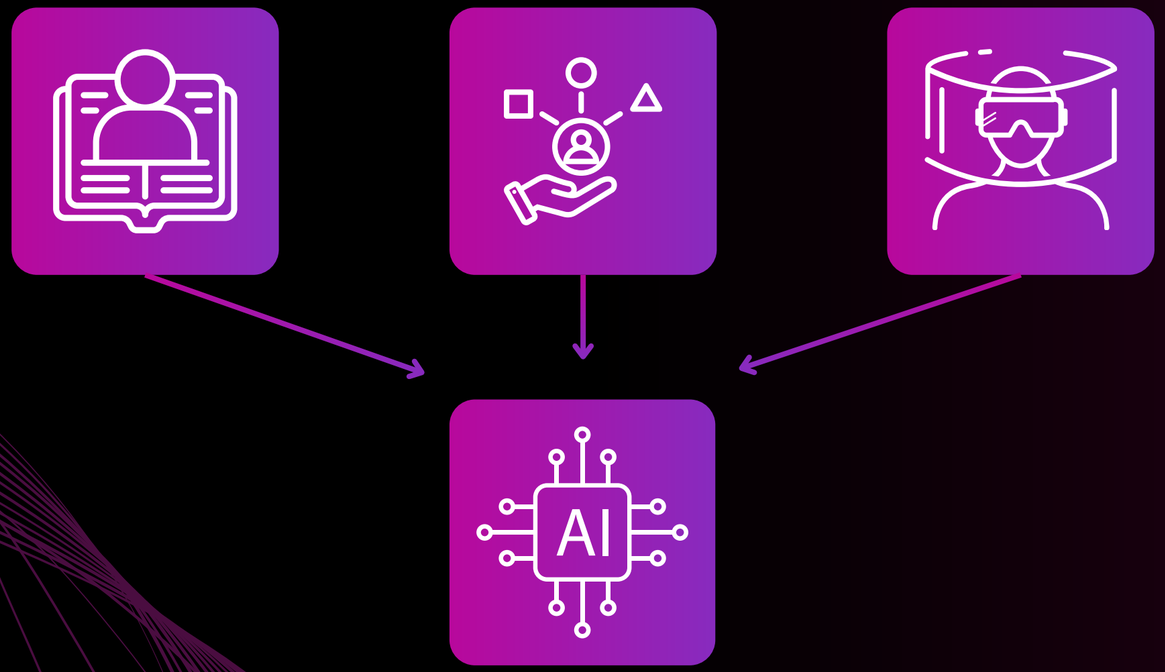
To teach and make the knowledge more accesible

Theoretical foundations

AR & VR

To make the user see the world as it once was.

Proposal for Campania



AI

To interact in first person with the past
To make history alive

Proposal for Campania

From static guidance interactive storytelling:
Moving beyond traditional guides, visitors engage with warm, character-driven narratives that foster emotional connection and curiosity.

From homogeneous experiences to personalized storytelling:
AI adapts narratives to visitor profiles (e.g., families, students, researchers), tailoring depth, complexity, and tone to maximize engagement.

From passive observation to active participation:
Gamified mechanics and AI-driven dialogue allow visitors to influence the story, turning them from spectators into co-creators of the experience.

From isolated visits to continuous cultural engagement:
Extending the museum or site beyond its walls, AI enables follow-up storytelling, virtual interactions, and community building after the physical visit.

Expected Growth

Pompeii Archaeological Park

4.069.377 (2024)

20.000

Roman Colosseum

14.733.395 (2024)

3.000

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- To attract new audiences and enrich the visitor experience.
- To democratize cultural heritage beyond elite tourism.
- To create a replicable model that can inspire and be applied to other heritage sites worldwide.

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Thank you for your attention