Muse MemorIA

Giving a voice to the past
— through conversational memory

Interactive cultural avatars
for heritage-driven brands and institutions

CentraleSupélec | université PARIS-SACLAY

NeoBreizh
Techno-Creative Studio

Visitors want to experience culture

not just read wall texts

- **Young visitors**: static content, boring, no interaction
- **International visitors**: language still a barrier

The Opportunity

- **65%*** of visitors already expect **AI as a complement to traditional cultural experience**.

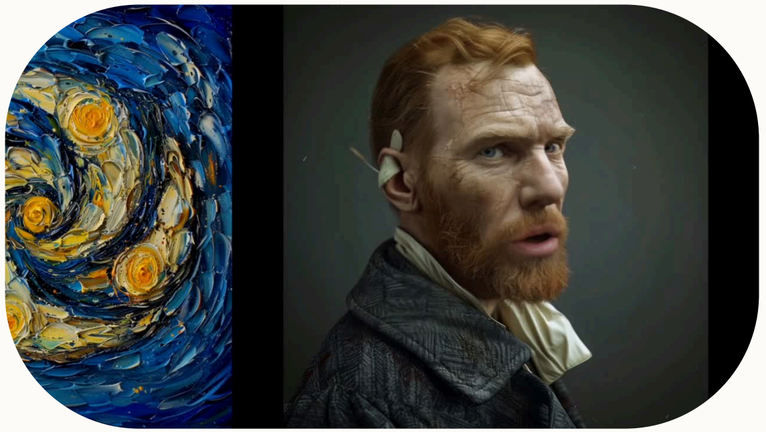
Source: 2025 Museum Audiences Barometer – Institut GECE

The technology is ready
The use cases are real
The moment is now

From animated storytelling to live conversation

Muse MemorIA, 2 levels

1. Animated Storytelling



🎥 Scripted AI videos	Animated avatar, scripted, multilingual. Immersive but not interactive	☑️

From animated storytelling to live conversation

Muse MemorIA, 2 levels

2. Live Conversation

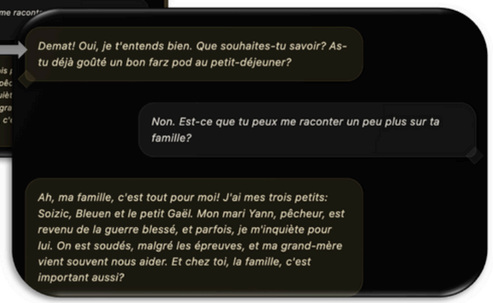
💬 **Interactive dialogue in real-time**	**Real-time dialogue with visitors. Voice, face, conversational AI.**	***This is the challenge!***

Interactive Experience

An Immersive conversation with the past

- La visiteur pose une question et l'avatar d'Yvette répond en temps réel avec sa voix, ses gestes, ses émotions, tout en s'adaptant au style du visiteur.
- Une transmission du savoir sous forme de dialogue interactif.
- Garde-fous techniques pour éviter les dérapages (vérité historique. Insultes...)

Le choix des langues
(jusqu'à 4 possible)



La conversation retranscrite en temps réel pour plus inclusivité *(timides, mal-entendants...)*

- *A **live conversation**, not a scripted playback*
- ***Knowledge shared** through dialogue*
- ***Real-time** voice and **embodied presence***
- *Multilingual and **inclusive** by design*
- *Grounded in **historical sources** and archives*

Why *live conversation* breaks today's AI systems?

- Short context windows → loss of narrative continuity
- Heavy API orchestration → latency + cost
- Classic RAG → relevant or fast - rarely both

"The challenge is not generating answers.
It's respecting sources and
conversational experience
in real time."

From Memory to Dialogue: Why a RAG Is Not Enough?

RAG

Perfect for knowledge access:

- *Searching relevant documents*
- *Retrieving matching passages*

Good for : historical facts, archives, rules, biographies, cultural context

Does not understand:

- *tone*
- *guardrails*
- *character consistency*
- *conversationnal state*
  (who's speaking, ON/OFF speech, etc.)

Not good with :sense of time, state, or interaction.

👉 *A RAG reads documents. It does not manage dialogue.*

Research Challenge

Beyond prompt engineering.
This is a system architecture innovation

How can we design
*a **conversational memory** system*
*that is **long-term**, **knowledge-based** and **low-latency***
*for **real-time cultural avatars**?*

A multi-faceted challenge

at the cross-road of tech, ethics and design

AI & Systems engineering

Memory architecture, latency constraints, retrieval strategies

Conversational Design

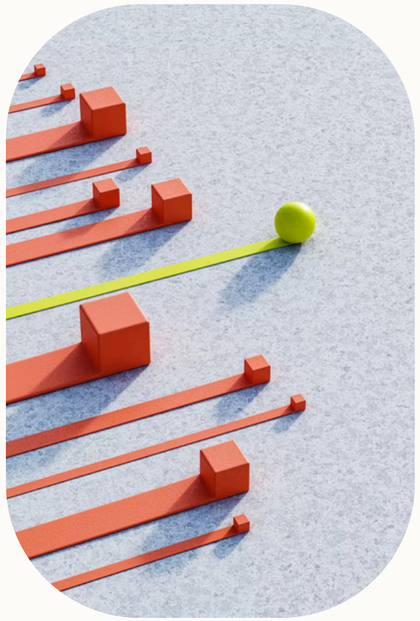
Linguistic, speech pacing, user comfort in dialogue

Ethics & legal frameworks

Historical accuracy, bias, source traceability, responsible interaction

Expected Outcome

1 week sprint



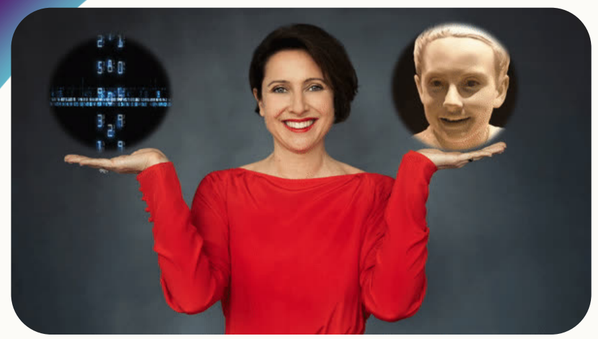
- ***A first prototype of a conversational memory layer***

Tested on a real cultural avatar

with a large, structured knowledge base

- ***Objectives**: latency / relevance / conversational ergonomy*

*And a path **toward a commercial product***



Carole Gendron
Founder — NeoBreizh Studio
Creative AI, cultural avatars
& interactive memory

Background:

- 25+ years at the intersection of **Data**, **AI** and **Business**
- **Strategist**, **creative technologist** and **artist**
- **International** background (Mexico, Spain, Amsterdam)
- Former **director roles in Data & AI** (Capgemini, Philips)
- **Now entrepreneur** launching Muse MemorIA, with cultural AI products already in the Market.

Why I'm doing this?

- To build **meaningful**, **accessible** and **responsible AI** at the intersection of culture and human experience.

"I build AI to serve memory,
not replace it".

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