

From Artifact to Experience: Using AR to Transform Museum Communication and Engagement

“A Case Study from the Egyptian Museum in Collaboration with Meta”

This project explores how we can use Augmented Reality not only to reconstruct the physical form of ancient artifacts but also to reshape how we communicate with visitors in more personal, accessible, and immersive ways.



by Dr. Samar Elkhamisy



RESTORATIONS

Look for the Instagram QR codes to
see artefacts restored using AR

Découvrez des artefacts
restaurés grâce à la magie
de la réalité augmentée.

شاهد القطع الأثرية المستعادة
من خلال سحر الواقع المعزز



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1-The Challenge: Reimagining Museum Engagement for a Digital Age



Moving Beyond Static Displays

Museums face pressure to evolve from traditional exhibits to dynamic, engaging experiences, particularly for younger, tech-savvy audiences.



AR as a Transformative Tool

Collaboration with Meta utilized Augmented Reality to allow visitors to truly experience, not just view, iconic objects.



Communicating Stories, Not Just Objects

The goal was to make ancient artifact stories personal, memorable, and relevant, fostering a deeper connection.



Aligning with Modern Trends

This initiative aligns with broader museum communication trends: personalized storytelling, immersive engagement, and digital inclusion.

2- Selecting Our Artifacts: Iconic Artifacts for Digital Reconstruction

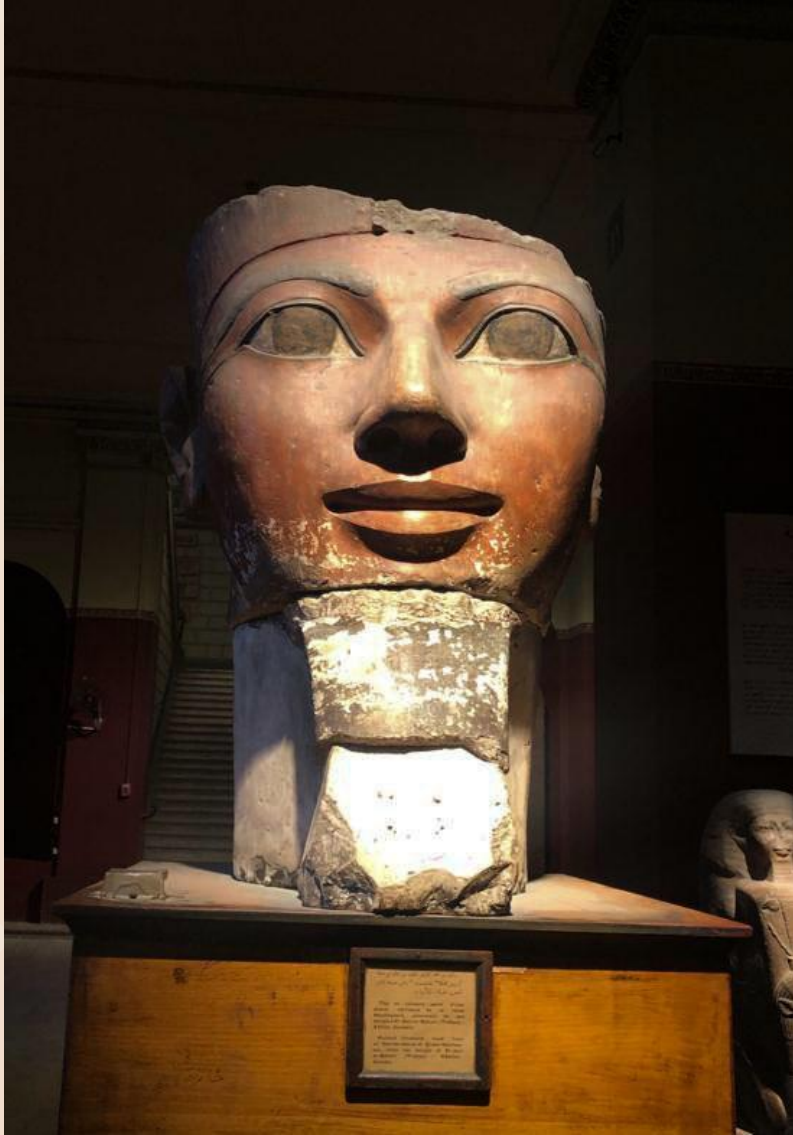
We selected five key objects from the Egyptian Museum collection, each with strong historical, artistic, and emotional value. These include:



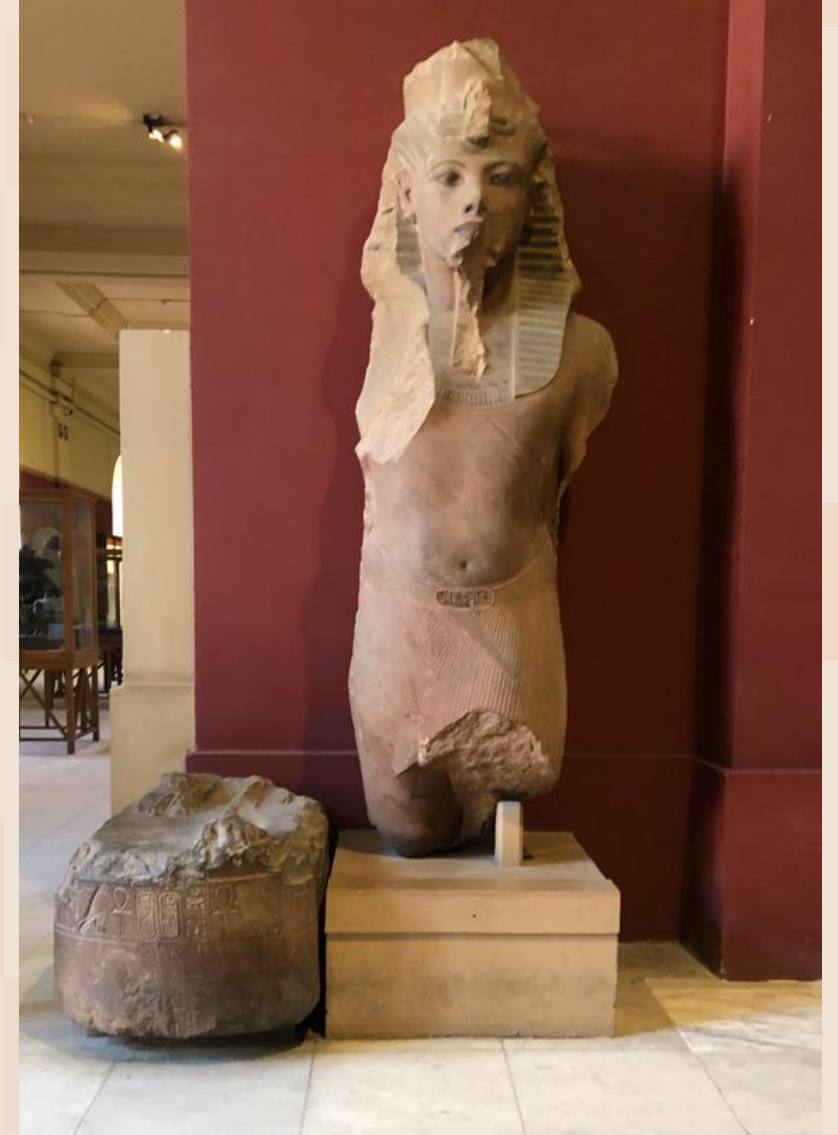
The Statue of Khasekhemwy - JE 32161



The Colossal of Senusret I- JE 37465



The head of Queen Hatshepsut – JE 56259



The Colossal Quartzite statue of Tutankhamun _ JE 59869



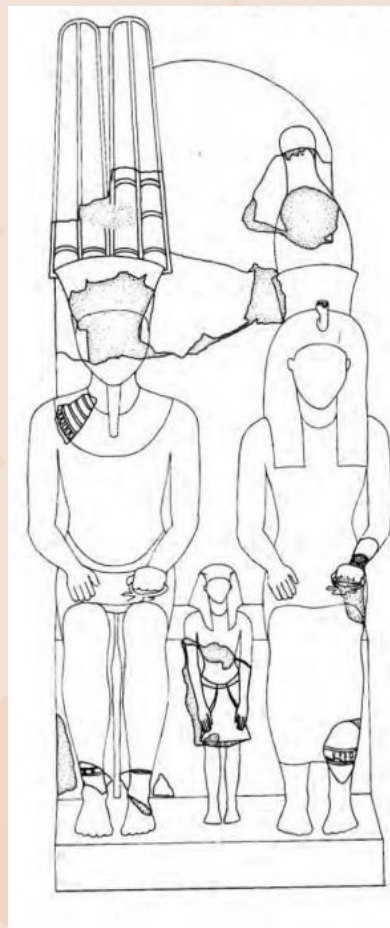
The Triad statue of Amun, Mut, and Seti I – JE 36490

3- The Curatorial Reconstruction Process

Before any AR experience could be built, we needed to reconstruct the story of each artifact with accuracy and integrity



Missing parts



Hieroglyphs



Hieroglyphs are a form of ancient Egyptian writing, consisting of pictorial symbols that represent words or sounds. They were used by the ancient Egyptians for religious, administrative, and commemorative purposes. The symbols are arranged in vertical columns, reading from right to left.

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Caption (Arabic & English)

Text 1

It represents the holy couple; The god Amun and his wife, the goddess Mut, who places her right arm around her husband's back; As a sign of affection. They are sitting on their throne, and King Seti I stands between them as their son. as the third member of the "Karnak Triad"; The god Khonsu; Therefore, the images of the statue of King Seti I are much smaller than the statues of the holy couple.

إنه يمثل الزوجين المقدسين. الإله آمون وزوجته الإلهة موت التي تضع ذراعها اليمنى حول ظهر زوجها؛ كدليل على المودة. إنهم يجلسون على عرشهم، ويقف الملك سيتي الأول بينهم باعتباره ابنهم. باعتباره العضو الثالث في "ثالوث الكرنك"؛ الإله خونسو، لذلك فإن صور تمثال الملك سيتي الأول أصغر بكثير من تماثيل الزوجين المقدسين.

Text 2

EN: In the religious beliefs of ancient Egypt, gods manifested in human, animal, or hybrid form. Each deity represented a specific force, for example, love, fear, or protection. Originally associated with wind and air, Amun grew in significance to become a major deity representing creation. The cult of Amun held prominence for many centuries.

AR: وفي المعتقدات الدينية لمصر القديمة، كانت الآلهة تتجلى في شكل إنساني أو حيواني أو هجين. يمثل كل إله قوة معينة، على سبيل المثال الحب أو الخوف أو الحماية. ارتبط آمون في الأصل بالرياح والهواء، وقد تمت أهميته ليصبح إلهاً رئيسياً يمثل الخلق. احتلت عبادة آمون مكانة بارزة لعدة قرون.

4- Bridging Worlds: Collaboration with Meta and AR Development

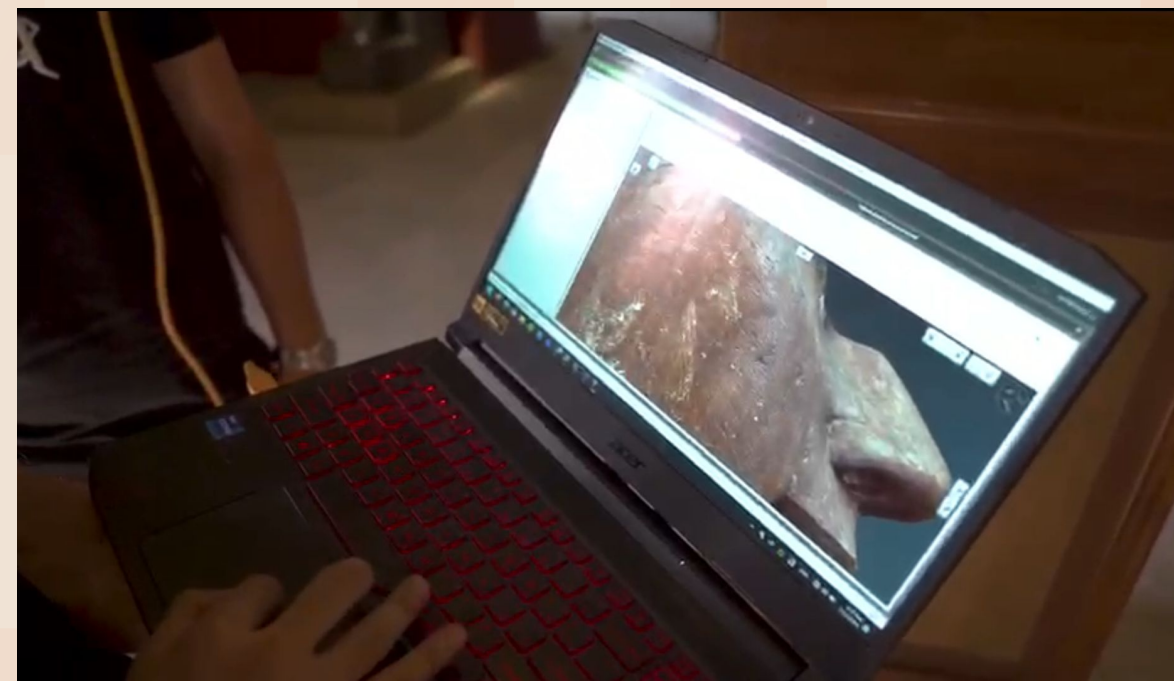
Once the research was complete, we worked closely with Meta's developers using **Spark AR Studio**, Meta's platform for building interactive AR filters.



Sharing Research

Provided 3D scans, artistic reconstructions, and historical data.







AR Development

Developers translated data into interactive AR animations via Spark AR Studio



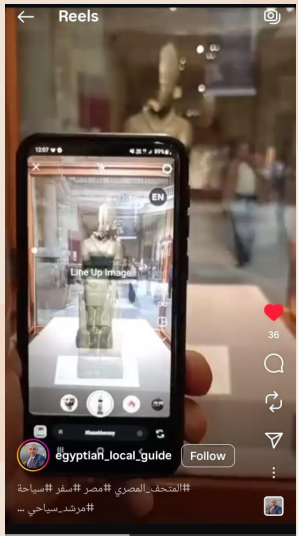
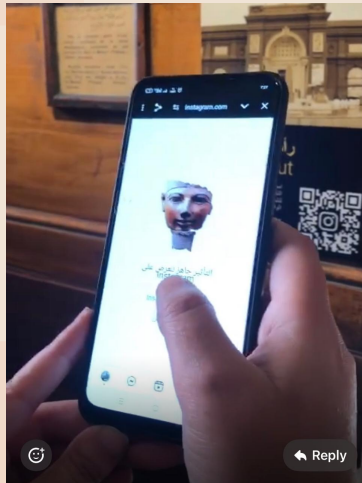


QR Code Activation

Visitors scan QR codes next to artifacts for real-time AR experience



5- Impact & Engagement: Visitor Experience & Communication Impact



Conclusion: Redefining Museums for the Digital Age

This project powerfully demonstrates how emerging technologies, particularly Augmented Reality, can fundamentally redefine the role of museums. We move beyond mere preservation to become dynamic platforms for **personalized, inclusive, and emotionally resonant communication**.

Responsible Design

Ensuring AR content is authentic and deeply researched.

Strong Research

Anchoring digital experiences in rigorous archaeological evidence.

Youth-Led

Collaboration
Empowering young professionals to drive innovation.

By embracing these principles, we can effectively bridge the gap between the ancient world and today's digital society. This case study is not just a successful model; it's an **invitation** to think differently, experiment responsibly, and use technology for meaningful connection.

THANK YOU
