



Persistent memory. A verifiable history.

A detailed landscape painting serves as the background. It depicts a calm body of water reflecting a large, glowing orange sun. In the distance, a silhouette of a castle with multiple spires sits atop a hill. The sky is filled with soft, dark clouds. In the foreground, a path leads through autumn foliage, including trees with pink cherry blossoms and trees with orange and red leaves. A small black bird is perched on a branch in the upper right corner.

They asked for the
next frontier of AI.

We gave their agent a memory
it can defend under oath.

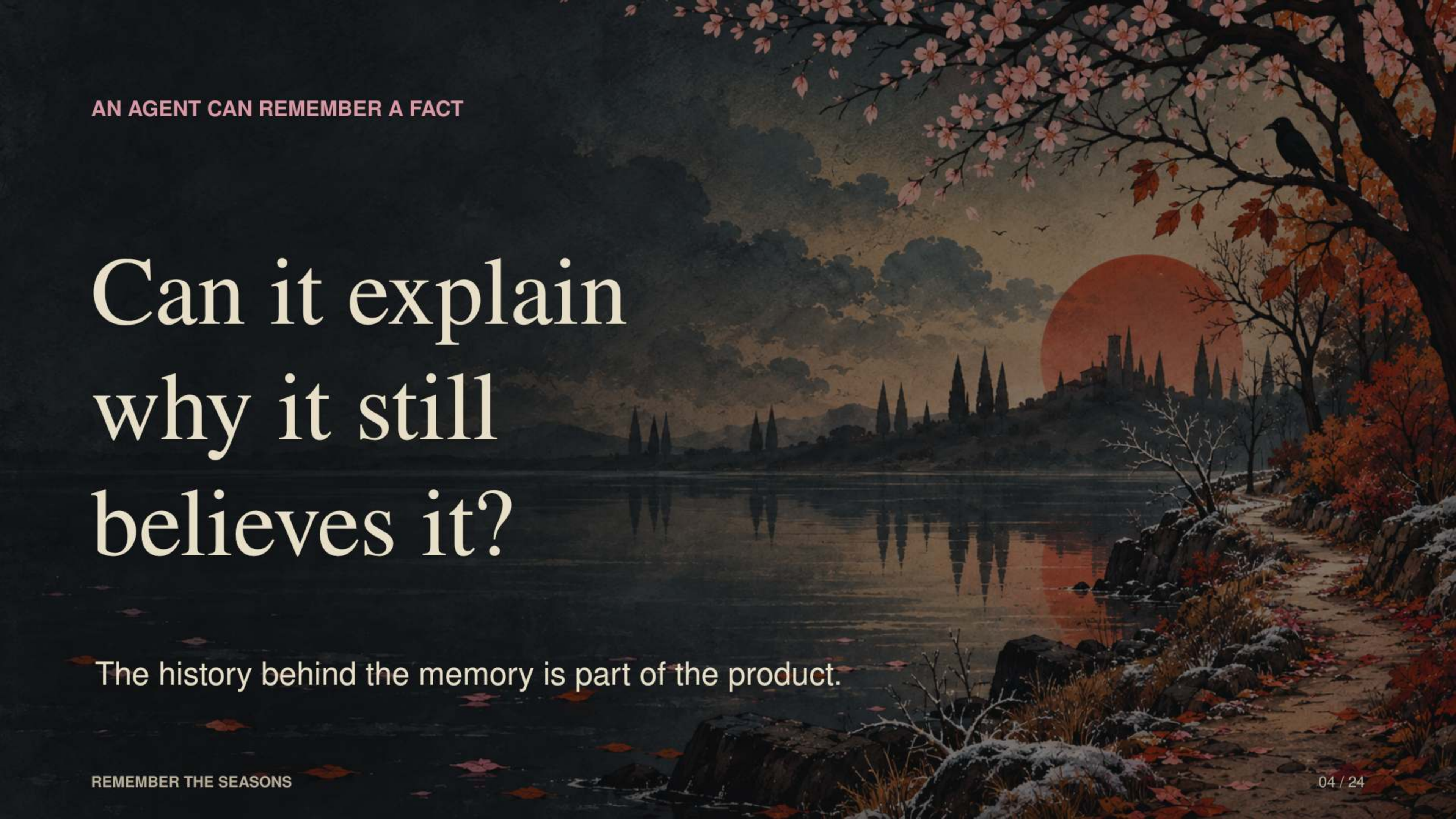
Persistent memory with cryptographic receipts
and counterfactual replay.

Months of memory.
A traceable change.

An assistant learns your context
over weeks and months.

Its next change in behavior
comes with a history to inspect.



A scenic landscape painting. In the foreground, a path leads through autumn foliage and rocks towards a calm lake. The lake reflects the sky and the distant shore. On the far shore, a silhouette of a castle with multiple spires is visible against a large, glowing orange sun. The sky is filled with dark, dramatic clouds. In the upper right corner, a branch with pink cherry blossoms hangs down, and a small black bird is perched on it.

AN AGENT CAN REMEMBER A FACT

Can it explain
why it still
believes it?

The history behind the memory is part of the product.

Memory with a verifiable history



Cryptographic receipts. Custody chains. Replay.

For agents that stay with you

Personal assistants

Debugging agents

Auditors following the evidence

Memory today, with its explanation over time.



An answer arrives with a receipt

TRANSCRIPT – EVERY TURN, AS IT HAPPENED

mem-0000 The deploy gate requires staging to pass.

mem-0001 Rollbacks run via `ops rollback <release>`.

ask ▶ What do I need before deploying?

From sealed memory, I know: The deploy gate requires staging to pass. | Rollbacks run via `ops rollback <release>`.

SERVED – WHAT RETRIEVAL OFFERED
["mem-0000", "mem-0001"]

USED – THE MODEL'S CLAIM
["mem-0000", "mem-0001"]

REINFORCED – WHAT THE ENGINE HONORED
["mem-0000", "mem-0001"]

receipt 1b2107b9db41f0ea6535aeac4130... · decision dec-0000 · 1ms

ACTUAL RECORDED SESSION

Ask a question. Read the answer. Inspect the sealed receipt.

Found. Declared. Reinforced.

served

What retrieval
offered

used

What the model
claimed

reinforced

What the engine
honored

```
SERVED — WHAT RETRIEVAL OFFERED  
["mem-0000", "mem-0001"]
```

```
USED — THE MODEL'S CLAIM  
["mem-0000", "mem-0001"]
```

```
REINFORCED — WHAT THE ENGINE HONORED  
["mem-0000", "mem-0001"]
```

Each set has its own recorded meaning.

The past, recomputed

“What would the field have served then?”

```
season ► What do I need before deploying? as_of 2026-10-24T21:54:05.958...
```

```
what the field would have served THEN (recomputed from chains truncated at t, not a stored snapshot):
```

```
mem-0000 — The deploy gate requires staging to pass.
```

```
mem-0001 — Rollbacks run via `ops rollback <release>`.
```

```
receipt b7ad4d42084b4f1d63felbad4e81... · now serves ["mem-0000", "mem-0001", "mem-0002"]
```

Historical recall reconstructs the field from committed history.

One historical event. A different ranking.

DOCUMENTED REPLAY EXAMPLE

Actual recall

```
mem-0000  
mem-0001
```

Counterfactual recall

```
mem-0001  
mem-0000
```

A promotion is excised. Production recall replays.
The sealed report records the delta.

A memory system that explains itself

THE CAPABILITY

Recall

Memory history

Counterfactual replay

THE EVIDENCE IT ADDS

A cryptographically sealed receipt

A custody chain for each memory

A sealed report of the difference

NVIDIA Nemotron reasons over memory

The background is a dark, atmospheric illustration. In the foreground, a body of water reflects the sky and distant hills. On the right, a small, box-like character with a face and a bird on its head stands on a rock. The character's face is simple, with two dots for eyes and a small line for a mouth. The box has different colored panels: one with a sunset, one with a night scene, and one with a landscape. Cherry blossom branches with pink flowers hang from the top right. In the distance, a large red sun or moon is visible behind a silhouette of a castle or temple on a hill.

Reads retrieved memories.
Reasons over the question.
Declares the memories it used.

`nvidia/NVIDIA-Nemotron-3-Nano-30B-A3B`

The reasoning interface on Nebius Token Factory

Served by Nebius Token Factory

REASONING AND ANSWERS

NVIDIA Nemotron-3-Nano

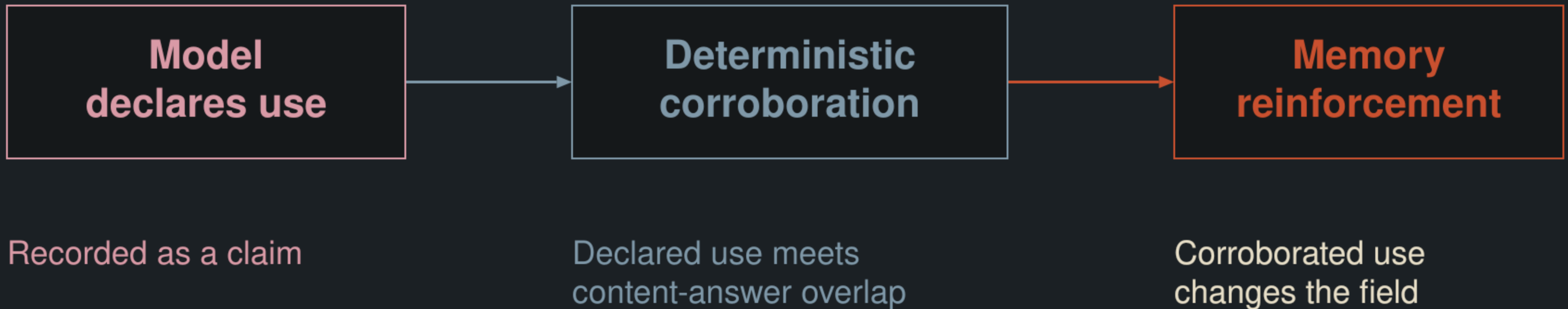
`nvidia/NVIDIA-Nemotron-3-Nano-30B-A3B`

RETRIEVAL EMBEDDINGS

Qwen3-Embedding-8B

`Qwen/Qwen3-Embedding-8B`

The model proposes. The engine corroborates.



The record preserves what the model said and what the engine honored.

A boundary tested under attack

A planted instruction challenged the model's declaration.

DETERMINISTIC CORROBORATION

Reinforcement follows the corroborated memory.

KASSANDRA SESSION NONCE

The declaration channel binds to the sealed receipt.

The post-fix rerun reinforced the corroborated memory.

Verified in your browser

VERIFICATION

VERIFIED + AUTHENTICATED – signed by the published trust anchor

- ✓ Recording digest — sha256 over the narration + sealed bundle 25cb8aa30b46a0ea441c...
- ✓ CF-1 DSSE envelope signature keyid 68460ebef3b13816 – matches this page's published trust anchor
- ✓ CF0 bundle digest — sha256 over canonical body cbd273c2959814a8...
- ✓ CF1 every chain dense + linked + genesis-bound 3 chains
- ✓ CF1.7 every sealed reference resolves
- ✓ CF1.8 keyed actors' events carry valid signatures attribution verified
- ✓ Narration cross-check — every cited receipt exists in the sealed bundle 3 ask turns checked, 0 not found in seal

3 memories · 3 decisions · 3 receipts · 21 event signatures · 11 narrated turns

Three inspectable layers

Operational state

What the agent can use now

Forensic trajectory

Why this memory state exists

Counterfactual replay

Whether one transition mattered

Independent implementations. Matching verdicts.

21 / 21

Python and clean-room Go agree
across the conformance artifacts.

`mneme-cf-bundle/v1`

Byte-for-byte corpus regeneration and differential checks in CI.

A detailed landscape painting serves as the background. In the foreground, a path leads through autumn foliage and rocks towards a calm lake. The middle ground features a large, dark castle with multiple spires situated on a hill across the water. The sky is filled with soft, dark clouds, and a large, bright orange sun is setting behind the castle. In the upper right corner, a branch with pink cherry blossoms hangs down, with a small black bird perched on it. The overall mood is serene and contemplative.

Research before trust

The design began
with attempts
to falsify it.

Adversarial research shaped the protocol
before the product took form.

Open it. Watch the seals verify.



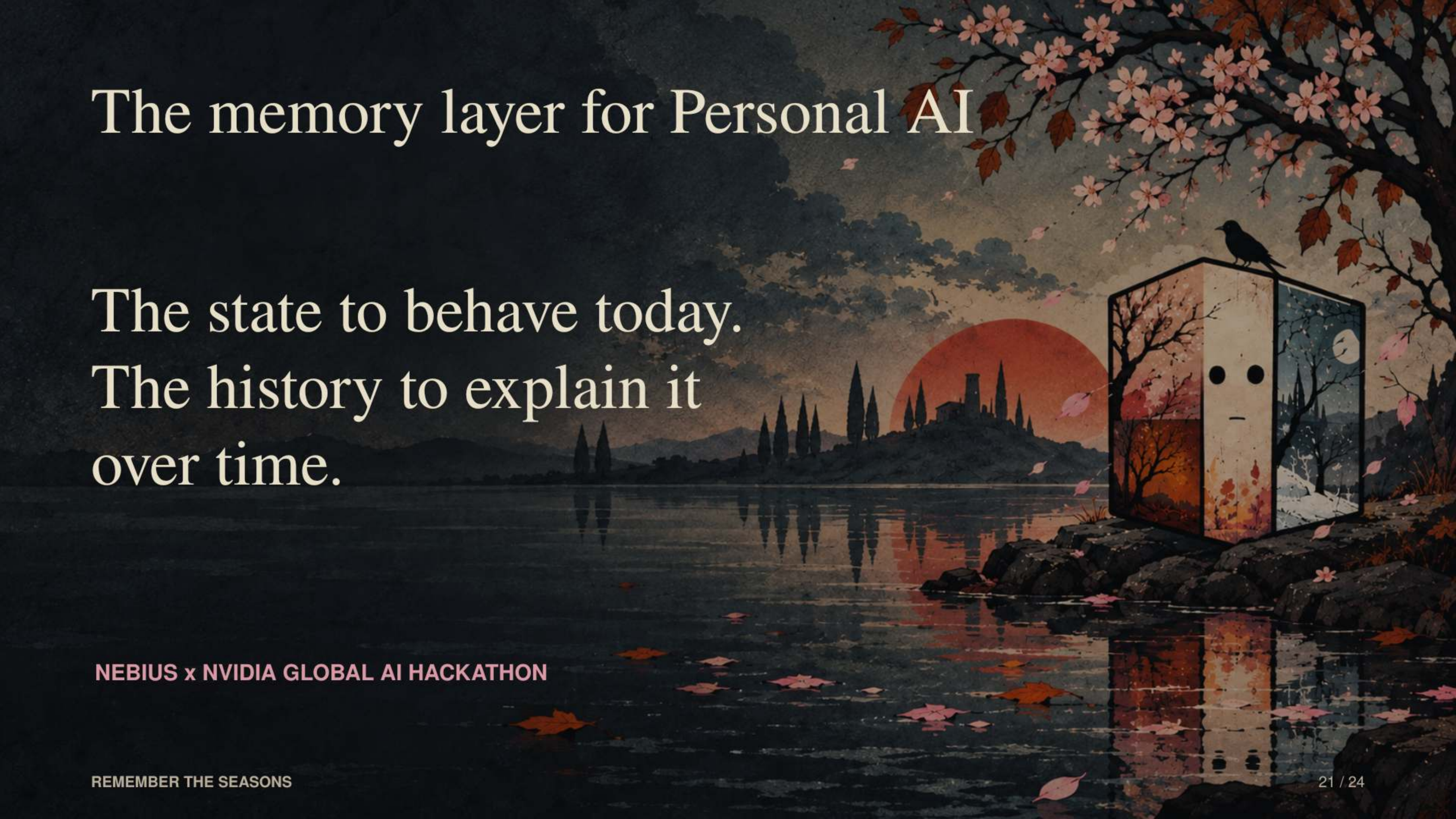
remember-the-seasons.vercel.app

A recorded session loads. Your browser recomputes its seals.

The memory layer for Personal AI

The state to behave today.
The history to explain it
over time.

NEBIUS x NVIDIA GLOBAL AI HACKATHON



The next season

VISION

More agent integrations

Broader model support

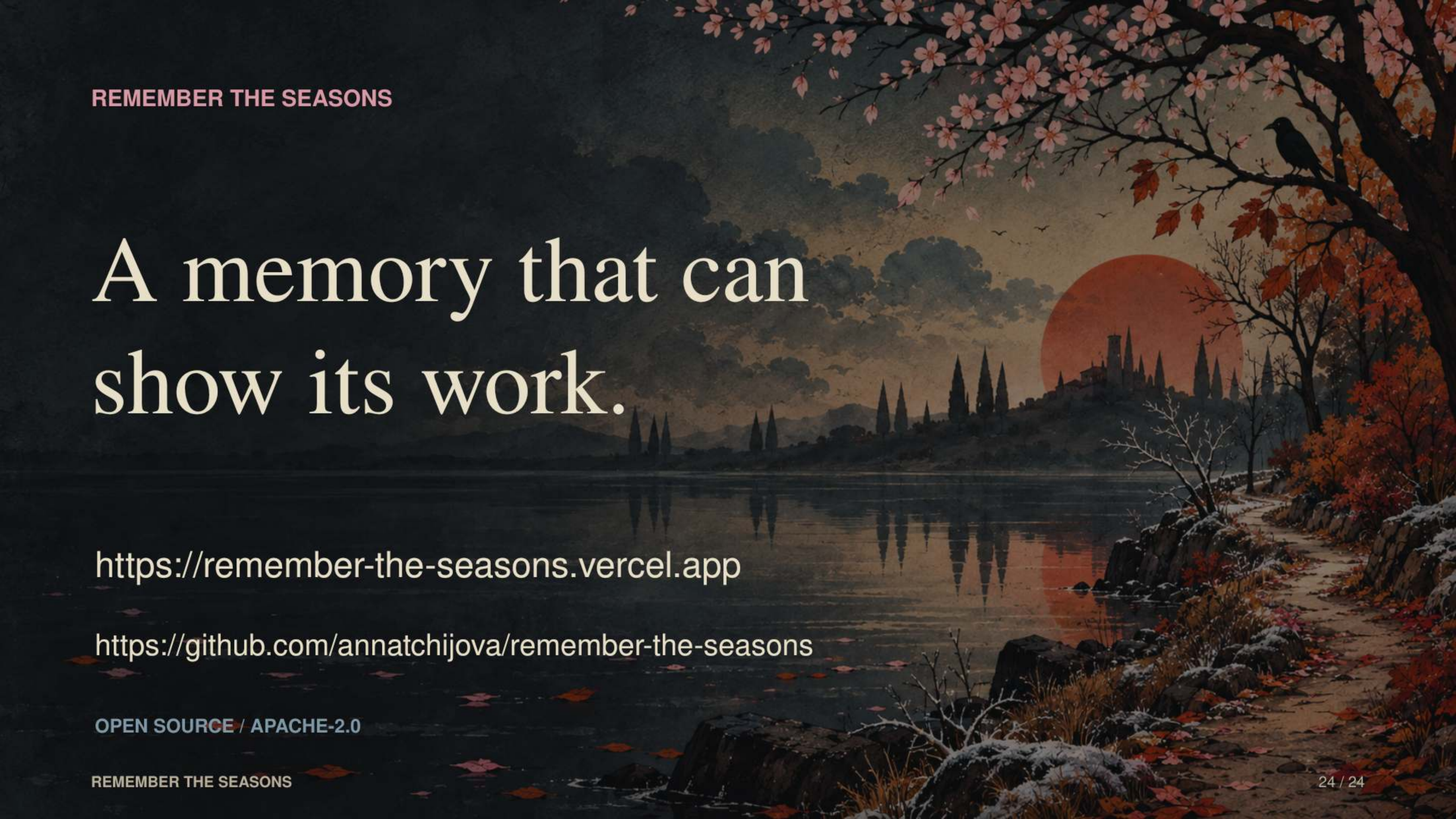
Deeper counterfactual exploration

Built by Anna Tchijova

Solo.
In under a month.

Research and protocol design.
Working product and clean-room verifier.





REMEMBER THE SEASONS

A memory that can show its work.

<https://remember-the-seasons.vercel.app>

<https://github.com/annatchijova/remember-the-seasons>

OPEN SOURCE / APACHE-2.0

REMEMBER THE SEASONS