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Cloudtail: A Grief-Sandbox Game for Pet Loss

A Poster to explain the artifact I developed for my MSc in Computer Science, Data Science and Artificial Intelligence.

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Abstract

Cloudtail is a grief-sandbox for pet loss. Memories shared by users are transformed into planetary states rivers flowing across the land, yarn-ball textures winding through the surface, amber fossils preserving weight, and shells shimmering with quiet light. These states connect with rituals generated by a modular system spanning memory, emotion, planet, ritual, crafting, and ethical layers. Rather than closure, the design sustains bonds and creates space for unfinished goodbyes.

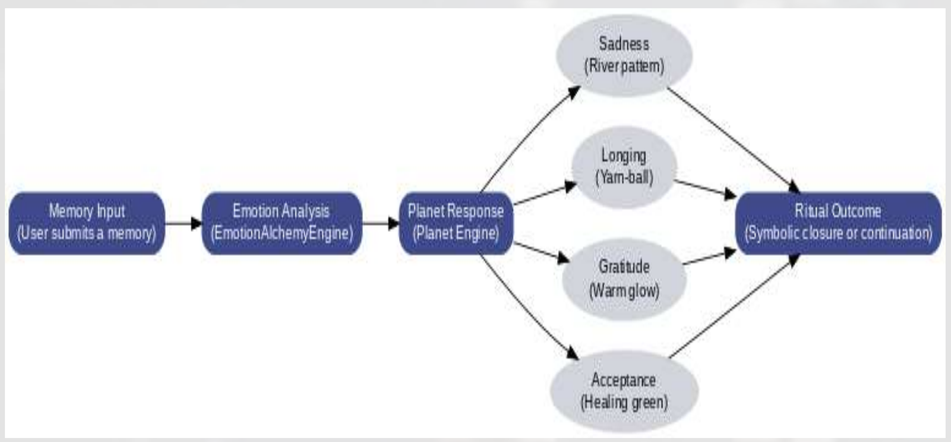
Introduction

Grief is not something that simply ends. Everyday reminders a quiet bowl, a sudden memory keep presence alive, echoing the idea of *continuing bonds* (Klass et al., 1996). Pet loss is often overlooked in public ritual (Doka, 1989), yet mourning can also be seen as an ongoing practice woven into daily life (Walter, 1996).

Cloudtail takes part in this conversation by exploring how digital spaces can host cyclical, revisitable remembrance. Inspired by memorial platforms (Massimi et al., 2011) and grief-accompanying games such as *Spiritfarer* (Eum, 2021), it invites memories to shape evolving planetary states and symbolic rituals that unfold at a pace chosen by the mourner.

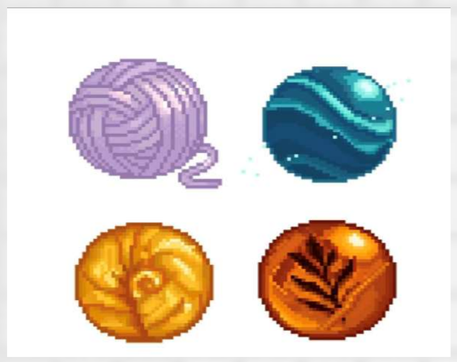
The Artifact

- **Purpose**: An interactive sandbox for pet grief, turning memories into symbolic rituals.
- **Architecture**: 6 modules → Memory, Emotion, Planet, Ritual, Crafting, Ethical.
- **Inputs**: Text memories (optional images).
- **Processing**:
  - Emotion Engine → symbolic categories (e.g. sadness → river, longing → yarn-ball).
  - Planet Engine → ambient states.
  - Ritual & Crafting Engines → symbolic items / ritual prompts.
- **Outputs**: A dynamic planet that evolves with grief states.
- **Tech Stack**: Python (FastAPI), MongoDB, HuggingFace pipeline, Unity frontend.
- **Strengths**: Modular design, cyclical interaction, user autonomy via manual overrides.
- **Limitations**: Current system relies on text input; multimodal memories remain future work.

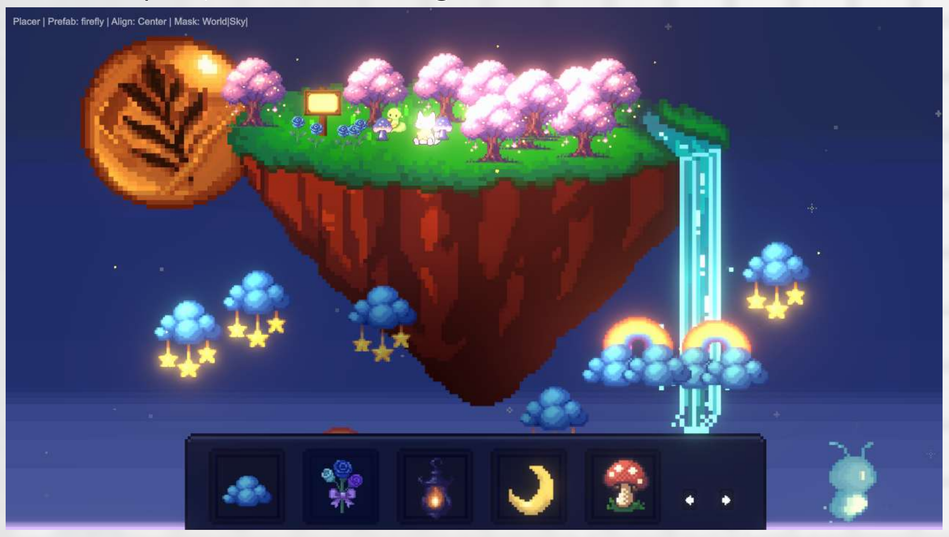


Results

System Flow: User memories are processed by the *Emotion Engine* into symbolic categories (e.g., sadness → river, longing → yarn-ball). The *Planet Engine* translates these into planetary states, while the Ritual and Crafting Engines generate symbolic prompts. This creates a cyclical loop where memories evolve into expressions that can be revisited at any time.

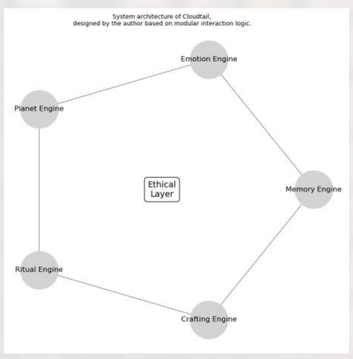


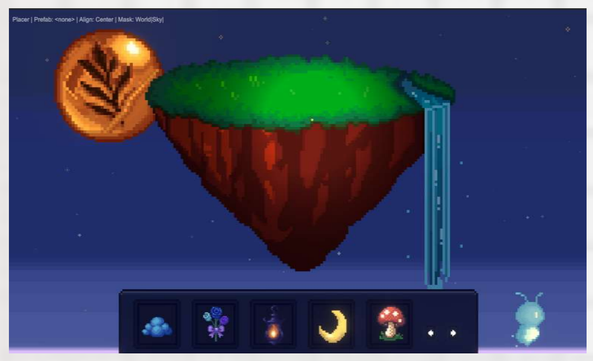
User Experience: In the sandbox, users decorate planets with symbolic items such as trees, stars, and rivers. Ambient colors and dynamic effects shift in response to submitted memories, letting the planet grow with grief states. This flexible design supports remembrance at the user's pace, without enforcing closure.



Discussion and Conclusions

Cloudtail moves beyond static memorials by introducing cyclical, symbolic interaction. Grief here remains open-ended, expressed through planetary states and rituals that can be revisited rather than closed. The prototype shows how memories, when translated into symbols and environments, can sustain bonds in a flexible, user-shaped way.
This highlights the value of pacing grief through symbolic design, creating a ritual space closer to lived experience. While the current system is text-based, future work will expand to multimodal memories and richer forms of interaction. In doing so, Cloudtail contributes to emerging digital mourning practices, showing how grief technologies can move from closure toward sustained, evolving remembrance.





GitHub Repository here