

Exploring the Future of AI with Disposable AI Systems

Introduction to Disposable AI Systems

In the rapidly evolving landscape of artificial intelligence, the concept of disposable AI systems is gaining traction. These systems, built on the foundation of Self-Generative Systems (SGS), are designed to learn and adapt from the moment they are activated. This post delves into the mechanisms of these systems, their sustainability, and the revolutionary potential they hold for the development of AI.

Understanding the Building Blocks of SGS

At the heart of SGS are Entity instances, each paired with its own HIISet, creating a one-to-one mapping. This structure allows for a finite number of Entity instances, determined by the fixed parameter P in the $\text{HIISet}\{P\}$ definition. Our previous discussions highlighted how relationships between entities are crucial for defining each instance, with operations such as the `advance` function in the `entity.jl` module facilitating dynamic inference and state projection.

The Role of HIISets in AI Adaptability

HIISets, devoid of analytically defined differentials due to their static nature, play a critical role in the adaptability of AI systems. By considering logically equivalent HIISets as representing the same entity, we shift our focus from physical representation to a conceptual framework. This approach allows us to handle different states of HIISets, applying measurements akin to differential and gradient analyses.

From Real Data to HIISets: A Transformation Process

The transformation of real datasets into HIISets is a fundamental process where each data element is converted into an integer hash value to construct an HIISet. This transformation is pivotal for drawing inferences about future states from current data, navigating the finite domain of real data and the co-domain of HIISet representation.

Self-Reproductive Learning and Sustainability

The training process in modern AI systems often resembles a self-replication cycle, yet it starts only after sufficient data has been gathered—a classic "catch-22." SGS systems, however, commence learning immediately upon activation, processing incoming data in real-time. This immediate functionality raises questions about long-term sustainability and the system's reliance on the provided data.

The Entanglement of HIISets and Disposable Nature of AI Systems

A defining feature of disposable AI systems is their ability to be decommissioned and replaced by new generations once they lose the ability to learn. This cycle ensures continual evolution and adaptation, making these systems both sustainable and efficient in resource usage. The concept of disposability in AI systems introduces a paradigm where AI can regenerate, creating better versions of themselves and passing responsibilities to their offspring.

Within the framework of HIISets, entanglement indicates that when fed identical data, HIISets—defined by diverse hash functions and possibly varying precision parameters (P)—tend to develop remarkably similar, if not identical, structures.

This occurrence points to a significant resemblance among different Self-Generative (SG) systems operating in similar environments, suggesting that the static and dynamic structures of these systems are closely aligned. **Leveraging this characteristic, we can enhance the performance of less efficient SG systems by importing structural elements from more effective ones. This process is referred to as SGS knowledge transfer.**

Conclusion: The Call for a New AI Development Approach

The introduction of disposable AI systems proposes a new methodology in AI development, emphasizing systems that can immediately start learning and processing data upon activation. Despite their limitations, these systems offer a cost-effective solution that minimizes resource consumption and embodies the potential for self-reproduction.

This innovative approach challenges the traditional methodologies of AI training and development, advocating for a shift towards systems that are not only self-sustaining but also capable of self-improvement and eventual replacement. It's time to start a conversation about the practicality and implications of disposable AI systems in the broader context of AI development.

References:

- [HllSet, Commit, and Self-Reproductive System](https://www.linkedin.com/posts/alex-mylnikov-5b037620_hllset-commit-and-self-reproductive-system-activity-7203144734293250048-WgM2)
- [HllSet Relational Algebra](https://www.linkedin.com/posts/alex-mylnikov-5b037620_hllset-relational-algebra-activity-7199801896079945728-4_bl)

For further discussions or inquiries about disposable AI systems and their potential impacts, feel free to reach out or comment below. Let's explore how these innovative systems can redefine the landscape of artificial intelligence.