Qeios

Peer Review

Review of: "Physical AI Agents: Integrating Cognitive Intelligence with Real-World Action"

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Overall, a really informative article about Vertical and Physical AI agents. The Physical AI Agent has three main components: Perception, Cognitive, and Actuation Block. The author provides many use cases with specific examples, including roles and key components.

- 1.3 should come earlier than 1.2 or even in the introduction.

- The reader is often lost with the definitions. Since "Vertical AI" and "vertical intelligence" are very new terms, please provide (academic or not) definitions and even some examples.

- Explain first what AIG is and then why it is an aspiration. What is the connection of AIG with "generalist AI" or vertical AI agents?

- I would recommend a table with Vertical vs. Physical AI Agents and their characteristics, features, use cases, and limitations.

- Are the robots of today and tomorrow always going to be physical AI agents? Or, the other way round, are physical AI agents only robots or something else too?

- Vertical AI agents have industry-specific intelligence, so it is unclear why in your suggested Ph-RAG Architecture you mention industry-specific LLM and not Vertical AI agents?

- Why can the industry-specific LLM not be part of the cognitive block in the Physical AI agent?

- The first paragraph of 3.4 is interesting about the robotics platforms. But you do not refer to their connection with LLMs; do they support them or not? You have this, though, in your conclusion at Section 6.2 for future directions.

Declarations

Potential competing interests: No potential competing interests to declare.