Awareness AI Robot System for leading proactive behavior improvement

Project manager

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Summary of the project

How can people live their lives positively all the time? One keyword for that is 'awareness.' It's something everyone experiences when they lose motivation after being told, 'Study!' People find it difficult to approach things positively when they are told by others. However, we know that when we 'become aware' of the necessity and importance of studying, we can actively and positively engage in it, leading to significant achievements. Not only in studying but also in understanding 'what abilities we possess' and 'what areas we should focus on,' if we had a robot that could make us aware of such things, wouldn't our lives become more positive and vibrant than they are now? In this project, we aim to develop an AI that silently watches over us and provides appropriate support for awareness based on our abilities, striving to create a society where everyone can live positively.

Milestone by 2030

FY2030 Milestone

We aim to model the inner aspects of individuals, including insights and discomfort, in order to enhance the generalization of Awareness AI. This innovative model is designed to visualize physical conditions using digital technology and establish a groundbreaking medical field known as cognitive intervention therapy. Building on these achievements, we are developing a seamless system that offers assistance from artificial objects in everyday life, ensuring a comfortable experience for users. Additionally, we are tailoring this assistive system to cater to specific situations.

How is "awareness" understood in neuroscience?

Before supporting the kind of "awareness" that helps us take positive action—as described above—we first set out to understand how awareness arises in the brain. As an initial step, we began by tackling conditions that could be treated through the induction of awareness. Through this process, we discovered that supporting awareness can help address diseases for which no effective treatment has previously been established. One example of this is chronic pain.

Awareness can be thought of as the moment when something that was previously unconscious enters consciousness. However, this phenomenon does not always benefit us. Recent research has shown that chronic pain, for example, can be understood as an unfavorable form of awareness generated by the brain—a sensation of "pain" that arises consciously, even when there is no specific physical damage.

Using our Awareness AI in combination with Robotic Nimbus interventions, we have achieved partial success in resolving chronic pain, a condition that has long lacked effective treatments.

Building on these technologies, we have also launched the operation of a "Future Consultation Room". This initiative aims to treat a range of previously untreatable conditions using Awareness AI, initially focusing on pain and motor paralysis.

Furthermore, by deeply studying awareness in this consultation room, we have begun to develop capabilities for predicting future diseases based on our natural movements, such as walking. It has become increasingly clear that many signs of future health issues manifest in the body before we consciously become aware of them. A new health screening system based on this principle is nearing completion.

By leveraging these developments, our goal is to complete Awareness AI by 2030—a system capable of fostering mental and physical health through the induction of awareness.

Milestone by 2025

FY2025 Milestone

A system that enables individuals to proactively address issues they had resigned themselves to, such as chronic pain relief, developmental challenges in congenital neural anomalies, health caring, and aging—problems that seemed beyond their control by harnessing the assistance of robots is developed. To provide empirical evidence, we will establish an 'Awareness AI Lab' within a shopping mall, offering a platform for numerous people to experience the effectiveness of Awareness AI firsthand and propose Dynamic healthcare screening system.

By 2025, we aim to establish treatment protocols within the Future Consultation Room. The first site to implement this system will be the Chutoen General Medical Center. We will demonstrate the effectiveness of treatments for chronic pain and motor paralysis—conditions that can be addressed through induced awareness—based on predictions derived from observing natural movement.

By utilizing Robotic Nimbus, we will generate more effective forms of awareness, enabling treatment and rehabilitation of previously untreatable conditions. In addition, we will promote the introduction of robotic systems that can provide mild interventions to maintain health, preventing the onset of such conditions in the first place.

Through these initiatives, one of our goals is to contribute to the creation of vibrant and healthy communities where everyone can live with a sense of well-being.

Project structure