Booting up artificial personality in AI systems

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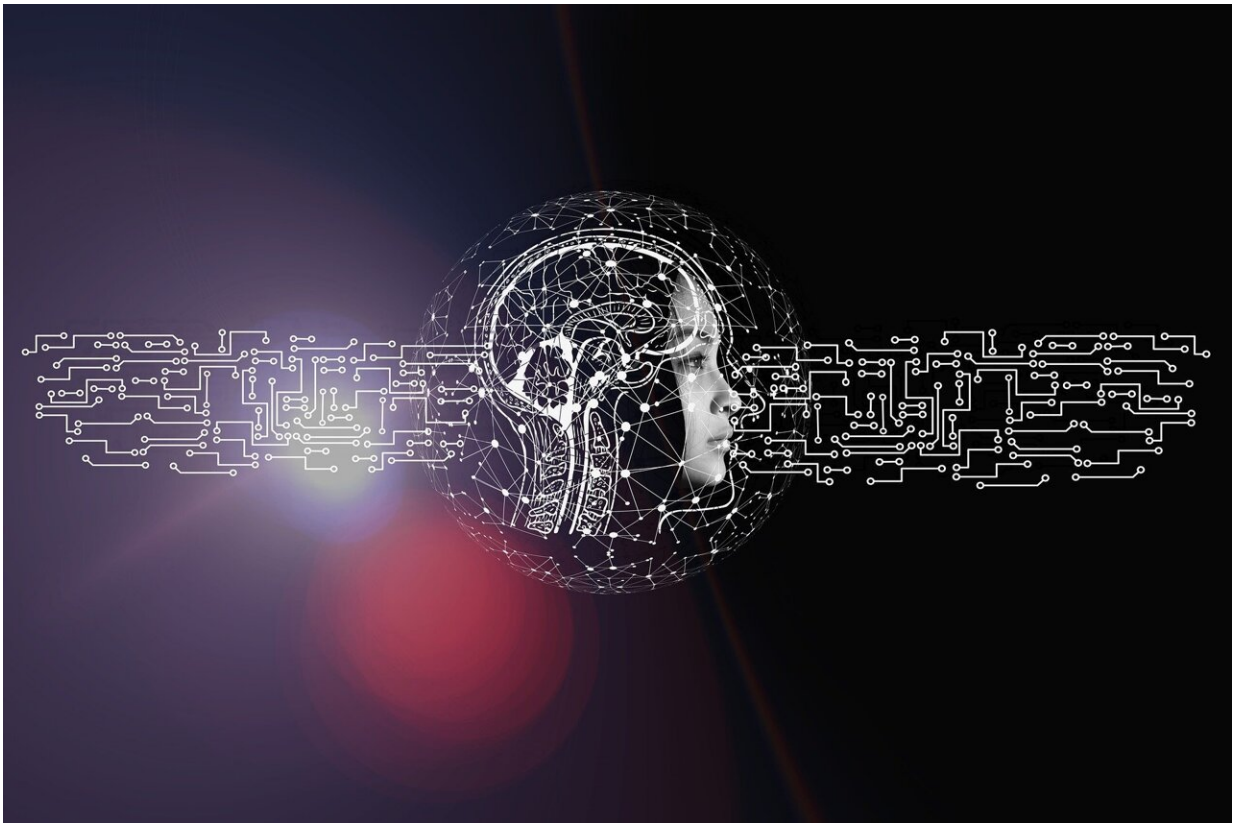

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Artificial intelligence (AI) is being used increasingly in many different walks of life from the large language models and image-generation tools that can produce readable text and intriguing graphics based on a prompt

to the algorithms that analyze input and predict a feasible output for modeling climate and weather systems, road traffic, and even human behavior.

There are AI tools that are being developed for online customer services, healthcare, education, art and music, and many other aspects of our lives. These systems would inevitably involve a person addressing an AI via a computer interface, a touchscreen, or an audio-video system of camera and microphone, and receiving answers to their questions or being asked questions by the AI itself to help them in some way.

At the moment, such interfaces, which are often referred to as AI chatbots lack the versatility and human touch of a real person and so there is some way to go before we see them truly integrated into our lives.

Research in the *International Journal of Computational Systems Engineering* introduces the concept of artificial personality (AP). In this work, Takayuki Fujimoto of the Department of Information Sciences and Arts at Toyo University in Saitama, Japan, promises to bridge the gap between the bland bots and bots that respond with more human-like characteristics.

This next generation of AP-enabled AI, would likely make our working with and using such tools much more appealing to a wider range of people, especially those so far reluctant to engage with this rapidly advancing technology.

Fujimoto challenges the state-of-the-art paradigm in AI and suggests ways in which its limitations might be overcome, side-stepping the existing AI frameworks and developing AP from the ground up. Ultimately, he foresees a time when AP allows us to develop versatile AI systems that seamlessly integrate into human lives.

The research focuses on the concept of eXtended Intelligence (XI) as the basis for designing a system that reproduces humanness in computer systems, XI represents the technological successor to AI and incorporates the ideas of AP.

XI will blend the strengths of human intelligence—processing sensory data, understanding, abstract thought, and free association—with the strengths of artificial intelligence—information storage and retrieval, processing, prediction, and objective analysis, explains Fujimoto.

We are yet to consider in detail the ethics and morality, the privacy concerns, and the technical obstacles of AI, let alone AP and XI but researchers are making rapid progress.

Nevertheless, the future paradigm shift from AI to AP and XI will have far-reaching implications taking us to the next level of computer intelligence away from the industrial narrow AI or the entertainment-focused AI.

XI with its inbuilt AP will not only perform tasks tirelessly, but will be able to respond to our emotions, preferences, and needs in much more subtle and useful ways than current AI technologies. One might even imagine XI acting as a caring personal assistant, providing companionship, and offering serious advice, all because the technology can comprehend and respond to our unique personalities.

More information: Takayuki Fujimoto, Reproduction of humanness based on eXtended intelligence: concept of artificial personality and its mechanism, *International Journal of Computational Systems Engineering* (2023). DOI: 10.1504/IJCSYSE.2022.131034

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