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J-BHI Special Issue on “Construction of Metaverse of Medical Informatics”

The proposal of the Metaverse has inspired many industry pioneers to explore the integration of related fields or in-depth or cross-industry. The Metaverse is built via algorithms and computing power based on Artificial Intelligence (AI), Big Data and Virtual Reality. Some people in the industry have predicted the development of the Metaverse. They believed that the “sub-Metaverse” with AI and Big Data foundation and limited to specific scenarios may be built first, and then many sub-Metaverses will continue to communicate with each other with development.

Metaverse gradually breaks the dimensional wall between virtual space and the natural world through the Internet of Things devices. Users can experience real life, work, entertainment, social interaction, and even disease diagnosis and treatment in virtual space through Virtual Reality/Augmented Reality (VR/AR), Blockchain, AI, and other technologies. Medical care is a traditional and conservative industry, but researchers have never stopped the exploration of medical technology. Many people believe that, the combination of the most cutting-edge technology with medicine can break the limitations of time, distance, and technology under ideal conditions. Although the Metaverse is still in the exploratory stage, there is no doubt that VR/AR in the Metaverse technology is feasible in the actual medical industry. The Digital Body platform can read medical images to understand the human body (including the heart, brain, chest, abdomen, and musculoskeletal system), analyze lesions, and generate auxiliary diagnostic reports for doctors. It provides physicians with an interactive, pixel-level presentation of medical images.

Topics of interest include, but are not limited to, the following:

- Multi-Modal Image Registration, Detection, and Segmentation of “Digital Human Body” Based on Metaverse
- Digital Virtual Human Body under Metaverse Supported by Medical Informatics
- Metaverse-assisted Clinical Decision-Making under Medical Information Data
- Disease Screening, Diagnosis, and Treatment Assisted by Medical Imaging Data in the Medical Metaverse
- Construction Techniques for the Virtualized and Hyperlinking Health Care Metaverse
- A Deep Fusion Method of Electrophysiological Indicators and Signals in the Metaverse World
- Construction and Application of the Healthy Metaverse based on Digital Sharing, Circulation, and Trading Mechanisms
- A Medical Metaverse Platform with Holographic Construction, Holographic Simulation, and Virtual Reality Integration
- Digitalization Scheme of Surgical Scenes in Medical Data Metadata Cosmic Environment
- Application of Medical Metaverse Based on Brain-Computer Interface and Digital Twins

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