

## 21st IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT (D3)

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### AI ENABLED WEARABLE DEVICES WITH EXTENDED REALITY : THE NEXT LAYER OF IOT AND MACHINE LEARNING

#### Abstract

Digital transformation has already reshaped the healthcare sector and has led to better and more accurate functionalities with AI analytics in wearable devices offering stats on patient's health, real-time insights, inference, diagnosis, and reports. Medical applications and devices are now connected to the healthcare IT system, which is AI-led and is known as the Internet of Things. With AI and wearable technology in space healthcare, it is now possible for astronauts and mission control centers to take precautionary healthcare measures at home by keeping track of their health details. IoT artificial intelligence wearable intricately connects all the data with real-time health monitoring sensors that furnish timely reports and display different health parameters that help the patients to make quick decisions and take necessary measures to keep themselves fit. The wearable AI market will likely witness significant growth owing to rising demand for smartwatches with high quality and more prominent displays. The increasing awareness among astronauts in space regarding the benefits associated with OLED technology with a better angle and excellent contrast is one of the key factors stimulating the growth of OLED displays. This, in turn, boosts the growth of the AI-enabled wearable device market. Furthermore, the rising adoption of VR/AR-based head-mounted devices in several verticals is propelling the growth of the global wearable AI market. Further, this paper discusses the proprietary AI-enabled devices which will significantly change wearable fitness accessories for space travelers. This, in turn, supports the growth of the global wearable AI market in the foreseeable future space exploration.

Keywords: Healthcare, IoT Wearables, ML/AI-enabled Bio-Digital Devices, (RTOS), Data Analytics, Event Triggers, and Predictive analysis