World Academy of Science, Engineering and Technology
International Journal of Computer and Information Engineering
Vol:17, No:08, 2023

Artificial Intelligence Based Abnormality Detection System and Real Valu℠ Product Design

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Abstract : This paper investigates and analyzes meta-learning technologies that use multiple-cameras to monitor and check abnormal behavior in people in real-time in the area of healthcare fields. Advances in artificial intelligence and computer vision technologies have confirmed that cameras can be useful for individual health monitoring and abnormal behavior detection. Through this, it is possible to establish a system that can respond early by automatically detecting abnormal behavior of the elderly, such as patients and the elderly. In this paper, we use a technique called meta-learning to analyze image data collected from cameras and develop a commercial product to determine abnormal behavior. Meta-learning applies machine learning algorithms to help systems learn and adapt quickly to new real data. Through this, the accuracy and reliability of the abnormal behavior discrimination system can be improved. In addition, this study proposes a meta-learning-based abnormal behavior detection system that includes steps such as data collection and preprocessing, feature extraction and selection, and classification model development. Various healthcare scenarios and experiments analyze the performance of the proposed system and demonstrate excellence compared to other existing methods. Through this study, we present the possibility that camera-based meta-learning technology can be useful for monitoring and testing abnormal behavior in the healthcare area.

Keywords : artificial intelligence, abnormal behavior, early detection, health monitoring
Conference Title : ICAISE 2023 : International Conference on Artificial Intelligence and Software Engineering
Conference Location : Bangkok, Thailand
Conference Dates : August 17-18, 2023