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AIEM: AI-enabled Affective Experience Management

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Abstract

Nowadays, with rapid development of artificial intelligence technology, the emerging human-machine interaction application researches grow up with machine intelligence, cognitive science and CEM (Customer Experience Management). This paper puts forward a new AIEM (AI-enabled affective experience management) method, blends AI and CEM in the emotion recognition and interactive intelligence application. Besides, in order to create good user experience, AIEM method also strives for the intelligence at various phases of emotion acquisition, emotion recognition, and emotion interaction. This paper introduces the composition and architecture of AIEM from three aspects, i.e. intelligent management of emotion data collection, accuracy management of emotion recognition, and real-time management of emotion interaction. Then we use advanced algorithm and model in two phases of emotion recognition algorithm and emotion computing offloading. Moreover, we select two deep learning algorithms (VGG-Net and Alex-Net) for facial expression recognition and speech emotion recognition, respectively. In the experiment using AIWAC system in real environment, we evaluate the emotion interaction delay in different computing nodes (Cloud and Edge) using AIEM method. Experiment results show that our method can provide intuitive and reasonable user experience management,

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