The Gesture Recognition Technology based on IMU Sensor for Personal Active Spinning

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Abstract— **Recently, as the desire for sustaining good health, has increased, spinning exercise to increase the exercise effect in a short time is getting the spotlight. In this paper, we developed a gesture recognition technology which enables busy persons to enjoy spinning exercise at any time and at any place they want using easy to carry wearable device. The proposed scheme provides a training system which collects real time data from an IMU (Inertial Measurement Unit) sensor attached to wrist and head of sports participants and analyzes the accuracy of spinning exercise using the decision tree-based classification scheme. For the validation of the spinning gesture recognition technology, we analyzed the performance of the proposal algorithm by applying it to the interactive gaming content platform. The results shows that the proposed the proposed technology can help users to enjoy correct spinning exercise program.**

Keyword—— **gesture recognition, spinning program, IMU sensor**

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