

Human Gesture Recognition Performance Evaluation for Service Robots

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Abstract—Intelligent service robots use gesture recognition technology that utilizes the MS Kinect sensor to facilitate natural interactions between humans and robots. To evaluate gesture recognition performance in a real-life environment, we constructed a new gesture database that takes into account cluttered backgrounds, various distances and poses, and movement of robots, and then we evaluated the gesture recognition performance of commercial robots. In this paper, we seek to help consumers, robot manufacturers, and gesture recognition engine developers provide comparable results for the gesture recognition capabilities of service robots.

Keyword— gesture recognition, gesture dataset, Kinect sensor, performance evaluation, service robot



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