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Enhancement of Gesture Recognition for Contactless Interface Using a Personalized Classifier in the Operating Room

Yongwon Cho , Areum Lee , Jongha Park , Bemseok Ko ,
Namkug Kim

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Highlights

- ► The risk of contamination could be decreased during surgical procedures ► we used Leap Motion™, with a personalized automated classifier, to enhance the accuracy of gesture recognition ► we used a multiclass support vector machine classifier and Naïve Bayes classifiers to predict and train five types of gestures including hover, grab, click, one peak, and two peak ► We compared gesture accuracy across the entire dataset to examine the strength of personal basis training ► we developed and enhanced non-contact interfaces with gesture recognition to enhance OR control systems.

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