UOK? A Baby Monitoring System for the Visually Impaired Parents

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Our application, UOK is a child monitoring application for visually impaired parents, which runs on android smart phone enabling the parents to easily check the child's activity states. There are millions of blind people living ordinary lives after marriage around the world. And one of the blind interviewer replied that the most inconvenient thing for them is that, they cannot know what their child is doing or where they are. This is why the UOK was developed, so that when visually impaired parents run the application with voice recognition function on the phone, it tells the child's activity states to parents, after classifying the data collected from the child's wearable device (smart watches). UOK is based on machine learning algorithm which is to classify activities with 205 features and 400 training basic data mounted on the application. The criteria code for classifying the child's activities (such as 'still', 'walk', 'fall' or 'swing') was programmed using machine learning algorithms and data collected from the accelerometer and Gyro sensors on the smart watch. As a result, UOK showed high accuracy (over 95%) in classifying. The prior motion detection method on market using image processing algorithm, was evaluated to be too heavy and expensive to be commonly used, whereas our new method used on UOK is simple and light enough to run on widely used processor of wearable devices. Moreover, UOK is practicable and marketable enough to be sold in the application store after minor errors and accuracy problems are corrected.

Awards Won: