

Abstract

This study discusses arm tremor detection using quaternion method. The output of this tremor detection is then used to classify the level of tremor in patients using fuzzy logic. Data is read by portable devices connected to Android-based devices. The data read was obtained from the accelerometer and gyroscope of the device which was attached to the patient's wrist and elbow. The experiments performed gave 100% accuracy to 10 subjects with five of whom had medical arm tremors.

Keywords: Android, IMU, fuzzy logic, quaternion