

Step Counter Algorithm

- Read the accelerometer data at high accuracy sensor value
- Isolate the force of gravity with a low-pass filter
- Remove the gravity contribution with a high-pass filter
- Aggregate the data from all 3 axis by looking at the Max Absolute Value. (I realize, the Pythagorean Theorem makes more sense here)
- Do Median Filtering on the windowSize
- Define a 'startWalking' method
 - o If a burst of change is detected, then start counting the steps
 - o This is jitter proof, the values of jitters are about the threshold of walking
 - o Else, wait for the burst of change
- When walking is detected
 - o Do Peak Detection