

Descriptive analysis

Wearable devices have brought data-collecting to the next level. To be able to collect advanced data like Heart beat per minute, and spatial data such as GPS coordinates and accelerometer have enabled us to monitor the condition of a device user 24/7.

This research is particularly interested in the connection between BPM (beats per minute) and changes in accelerometer reading. Factors that may influence BPM includes temperature, positioning of the body, and if the user is actively engaged in any sports. In this aspect, sudden jumps in BPM are expected to be somewhat linked to changes in accelerometer reading, as the accelerometer measures acceleration forces in any direction which can only be caused by movement of the device.

Normative analysis

Major players in the smartwatch market are namely Apple, Samsung, Fitbit, and Pebble, etc. Such products can be described mostly to be a platform product – a product that provides some functions and applications for the users to use in their own ways. Despite the firms' inclinations of providing horizontal platform devices, the findings of this project should interest more vertical producers of wearable devices. Firms that are more interested in leveraging the tremendous data-collecting capacity of the modern day wearable devices should be interested in finding out exactly what they can do with the massive amount of data that is being collected on a 2-second-interval basis. This paper believes that commercial value can be derived from the data-driven analysis and understanding of wearable device user behaviors.

Stakeholders:

Any business with an intention of designing products related to BPM monitoring & studying maybe interested in this project.

Impact:

Objectives: to investigate the correlation between sudden jumps in heart rate per minute and changes in accelerometer reading.

Metrics:

Heart rate per minute (BPM), also need to define what is a “spike” or “jump” in BPM.

Accelerometer reading