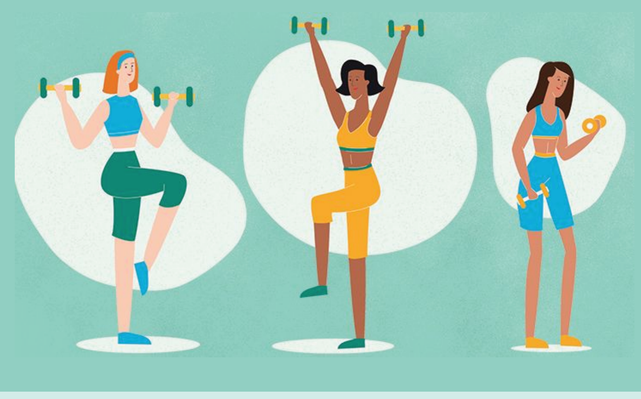
Which Fitness Tracker Is Better?



Analysis of Apple Watch and Fitbit dataset

IST 421 Information Visualization

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Story:

More and more people value health and started to use fitness tracking devices to track their daily activities. However, are these trackers accurate? This poster will give you an insight of the performances of two popular fitness trackers: Apple Watch and Fitbit; and some key factors determining the acitivities.

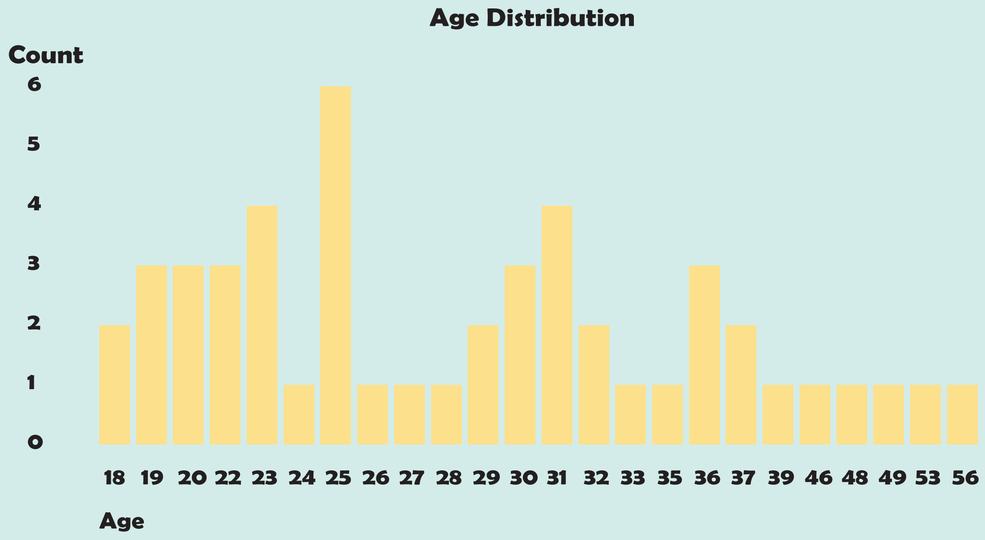
Motivation:

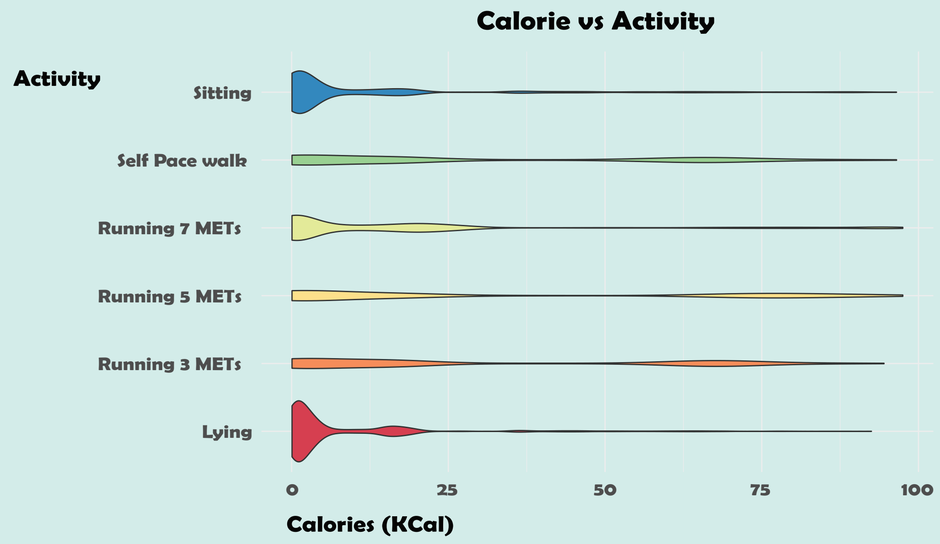
The users of these two fitness trackers might be interested in this. Because they want to see if their devices are effective in tracking their activities. These two companies might be interested in this. Because they want to see the drawbacks of their devices in the real life and seek for improvements.

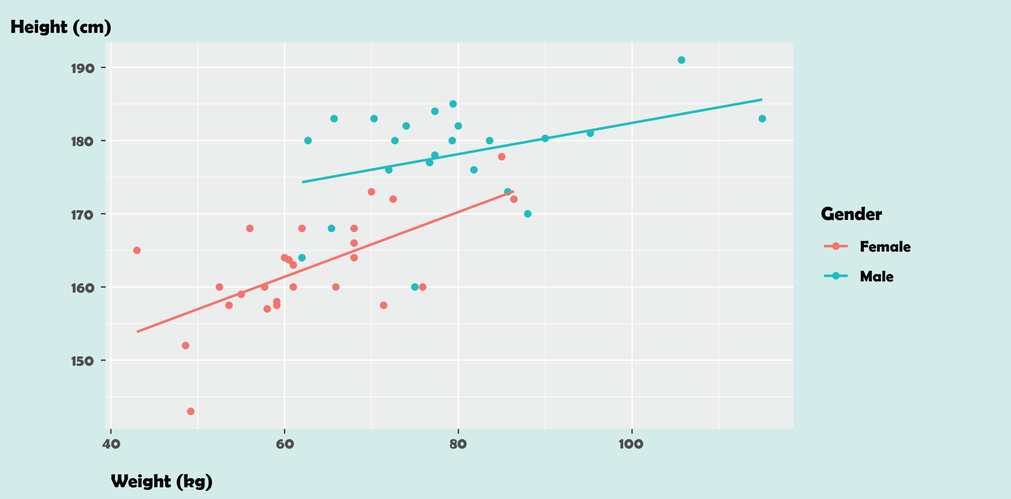
Data Description:

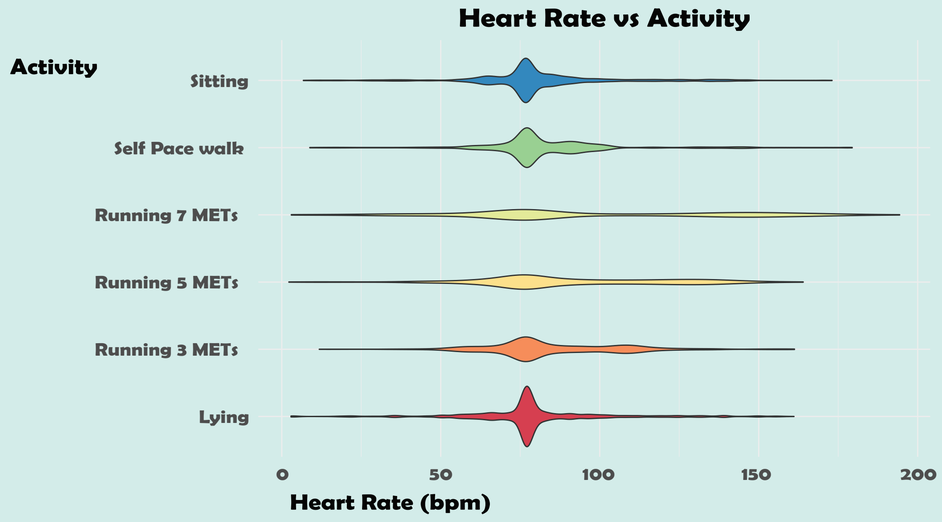
This dataset was sourced from Kaggle and was collected by Daniel Fuller in 2020 as part of Harvard Dataverse. It is the minute-by-minute data of 49 participants collected by two commercial wearable devices: Apple Watch and Fitbit. There are 6264 rows and 21 columns. It contains the demographic information of the participants, multiple exercise records, and 6 activities classes predicted by both devices.

What are the demgraphic information of the participants? What are the important factors affecting the acitivities?

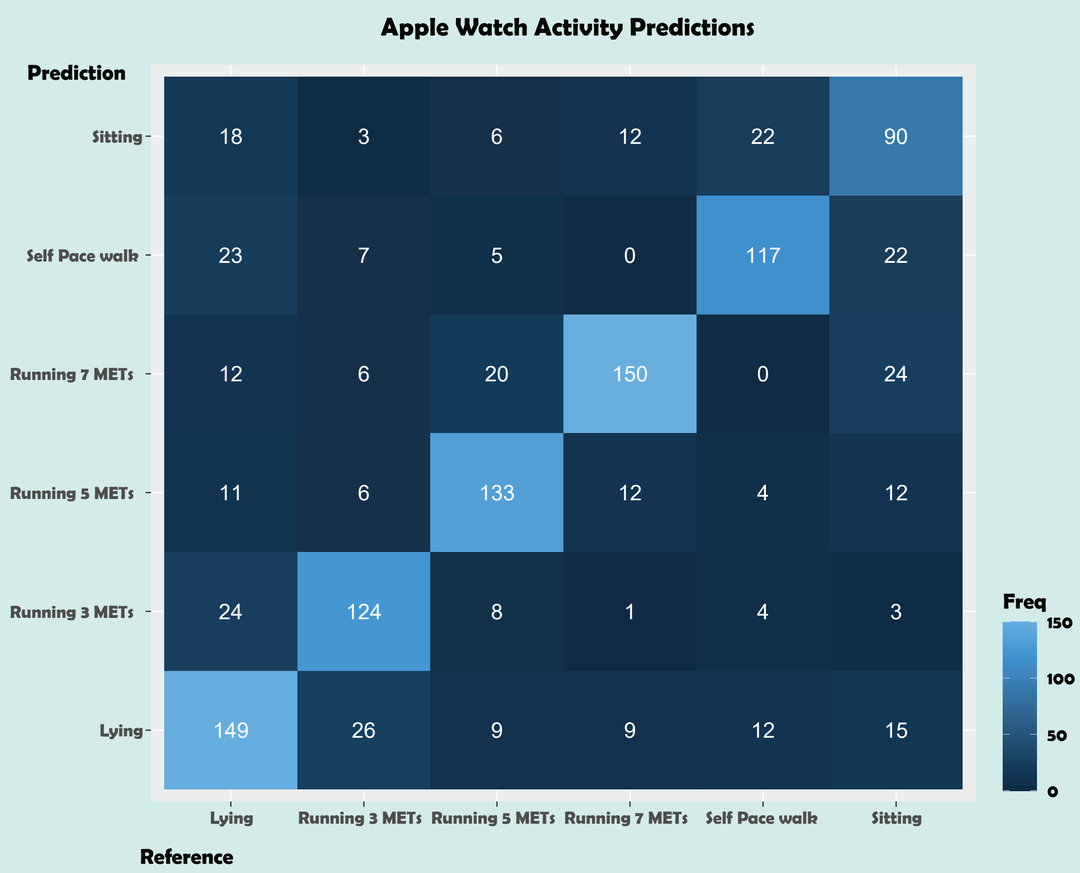


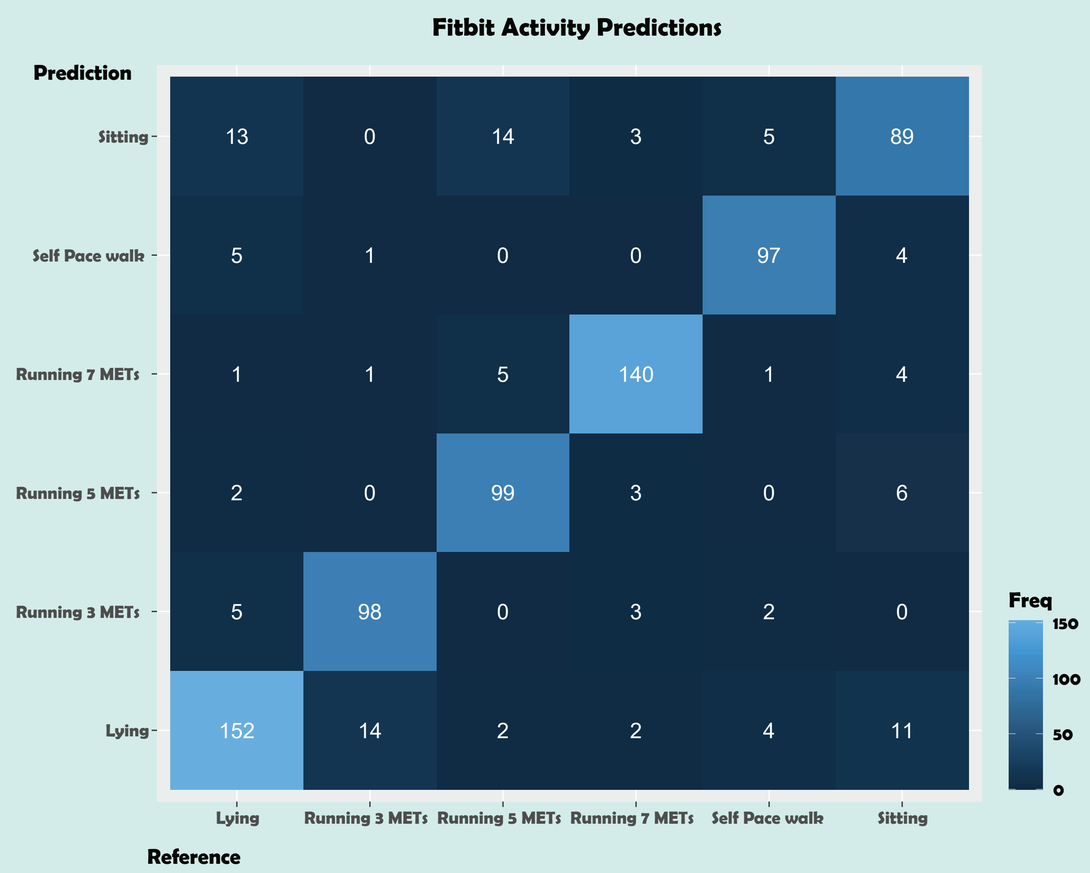




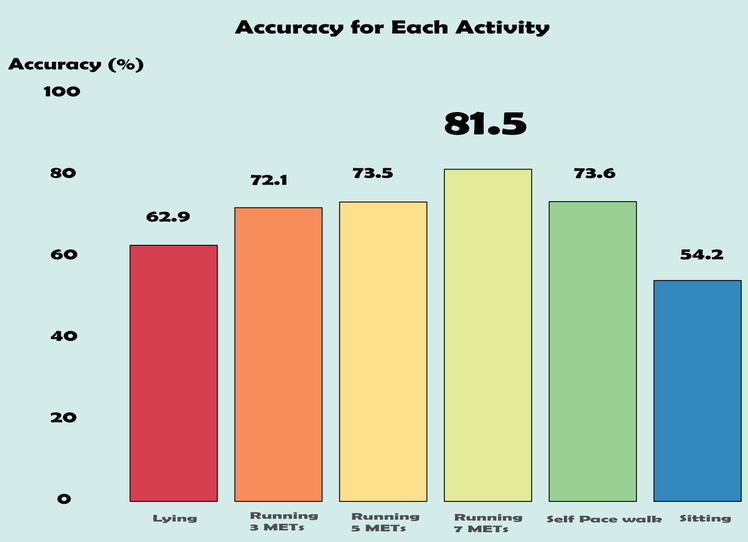


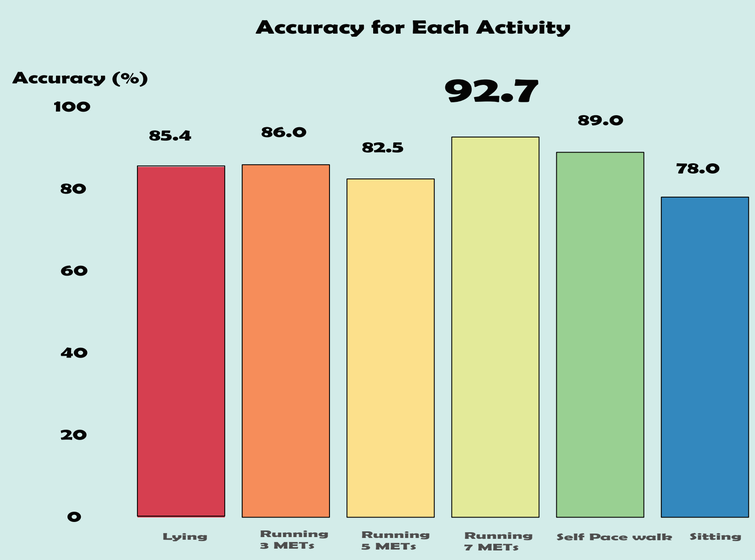
Can Apple Watch and Fitbit predict activities accurately?





Which activity has the best prediction?





Packages: ggplot2, RColorBrewer, stringr, ggthemes, RWeka, dplyr, caret, rsample

Source: https://www.kaggle.com/datasets/aleespinosa/apple-watch-and-fitbit-data