

Daniil Kistanov
Final Project report

Apple Health Data Export, extracting heartrate data

In the following project, I've decided to work with the information that Apple Watch collects while you wear it. I downloaded the export from the iPhone Health. The export contained every single recording of that that it collected since the first days I was wearing the Apple Watch.

The size of the export was over 600 mb xml file. I would definitely qualify that as a very large text file. I used the built-in xml parser in R, made the xml into a dataframe and extracted all data with tag "HKQuantityTypeIdentifierHeartRate." I needed to format the data to fit my analysis, so I used lubridate library to extract year, month and day.

Then using dataframe manipulation I separated all values by day in order to analyze the heart patterns at night.

I ran through every single day and generated a chart of my heartrate throughout the night. If you run the code, you will see a bunch of pictures for every single day that my heartrate was recorded.

I don't think my project is not fully completed as I intended it because initially, I wanted to predict the time I fell asleep based on the heartrate. I wasn't able to do that well.