

Data Analysis Report

By Haruta Tasaki (June 8 2024)

Data to be analyzed

- Daily Activity: distance in km, steps, consumed calories in kilocalorie
- Heart Rate: measured heart rate in bpm
- Sleep Day: total minutes of sleep, number of sleep in a day
- Weight Log: weight in kilogram, body fat in %, BMI

Fundamental data

Total number of participants: 33

Participants per dataset

Daily Activity	33
Heart Rate	14
Sleep Day	24
Weight Log	8

- Total number of participants is small overall.
- Number of participants for the weight log is quite low.

Daily Activity

Average data per user:

Id <dbl>	Steps <dbl>	Distance <dbl>	Calories <dbl>	VeryActiveMinutes <dbl>
1503960366	12116.742	7.8096774	1816.419	38.7096774
1624580081	5743.903	3.9148387	1483.355	8.6774194
1644430081	7282.967	5.2953334	2811.300	9.5666667
1844505072	2580.065	1.7061290	1573.484	0.1290323
1927972279	916.129	0.6345161	2172.806	1.3225806

2022484408

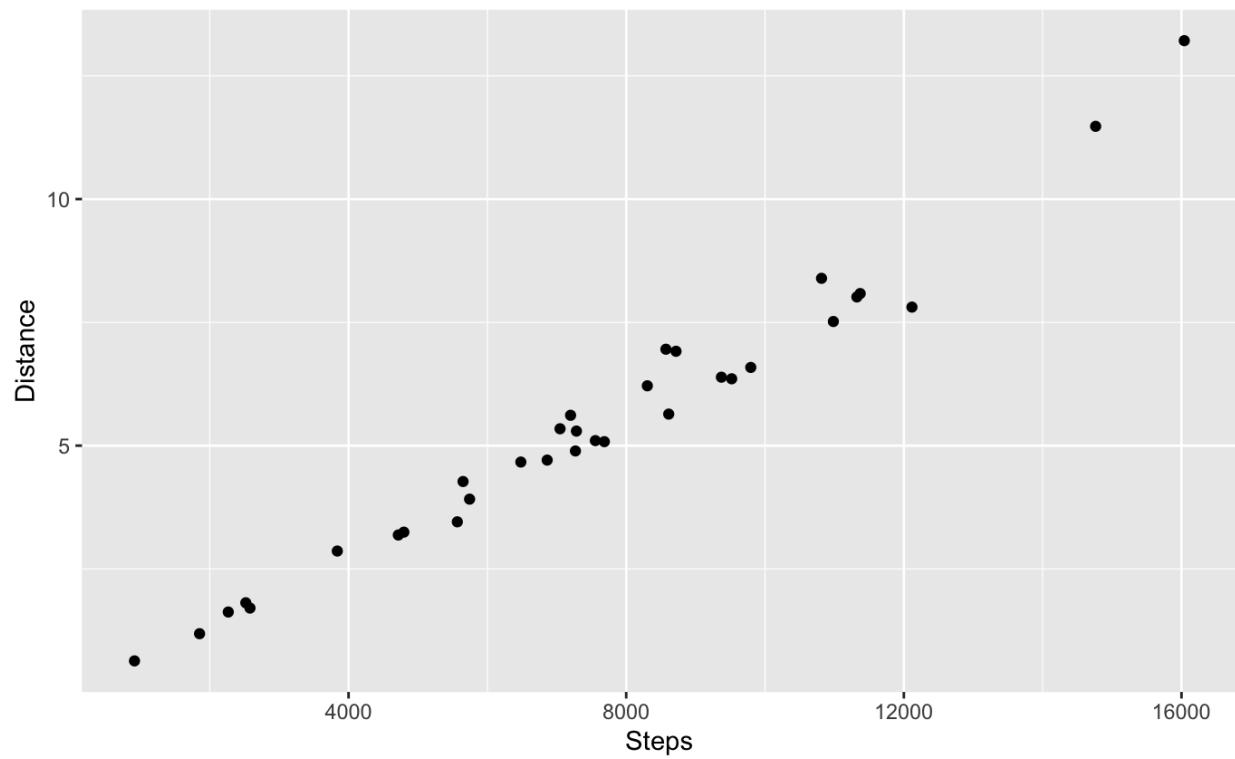
11370.645

8.0841935

2509.968

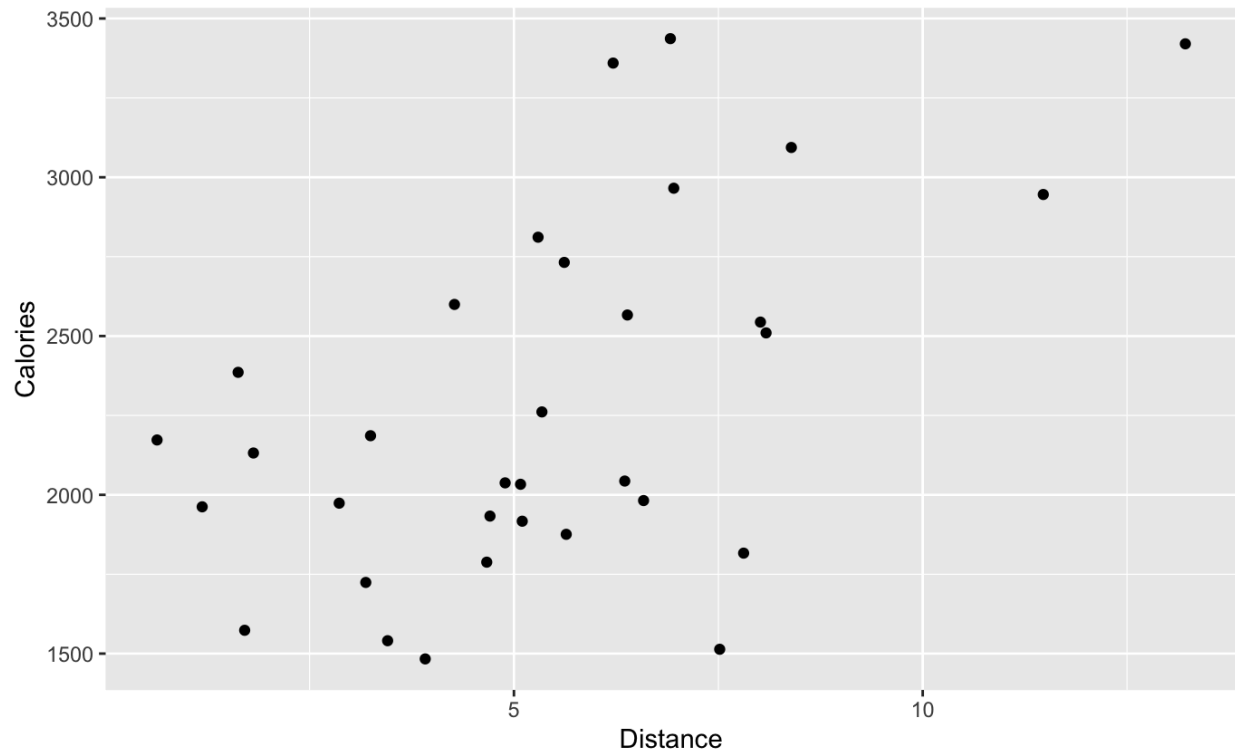
36.2903226

Visualized average per user : Steps - Distance



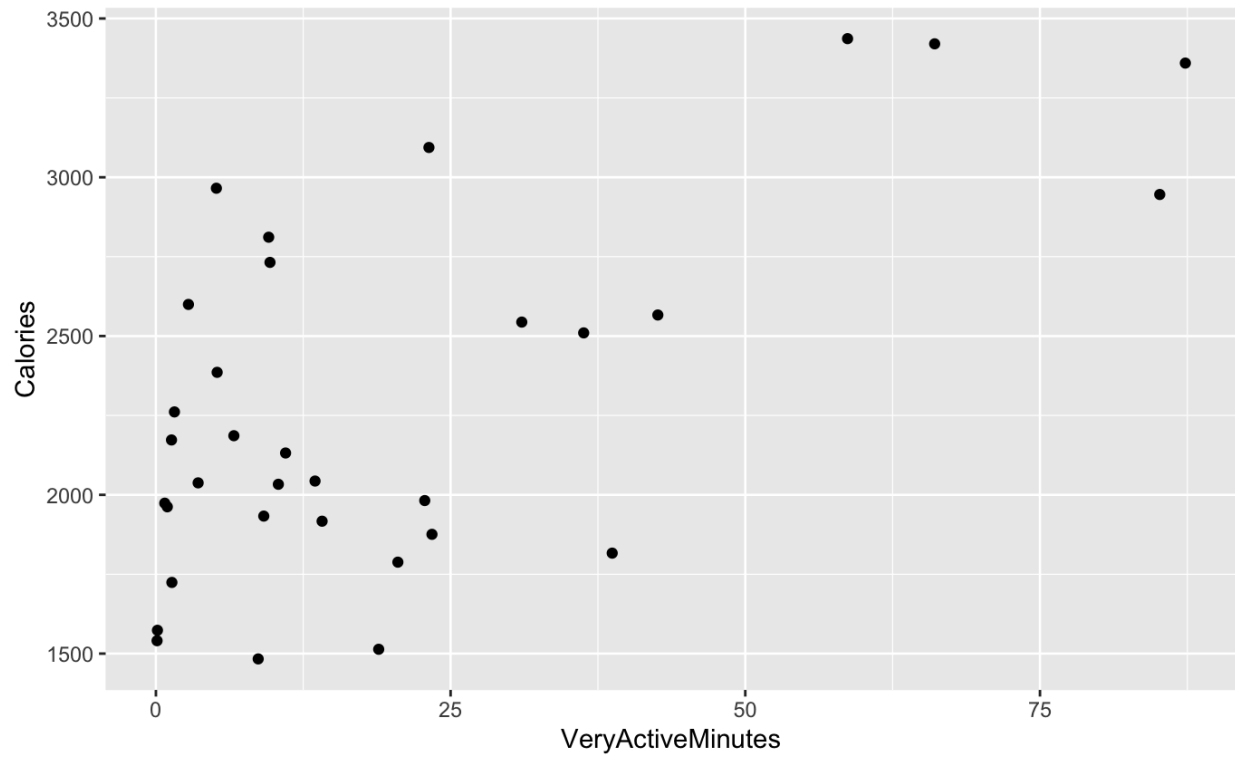
- There seems to be a correlation between total distance and total steps.

Visualized average per user : Distance - Calories



- There is less correlation between daily calorie consumption and total distance

Visualized average per user : Very Active Minutes - Calories

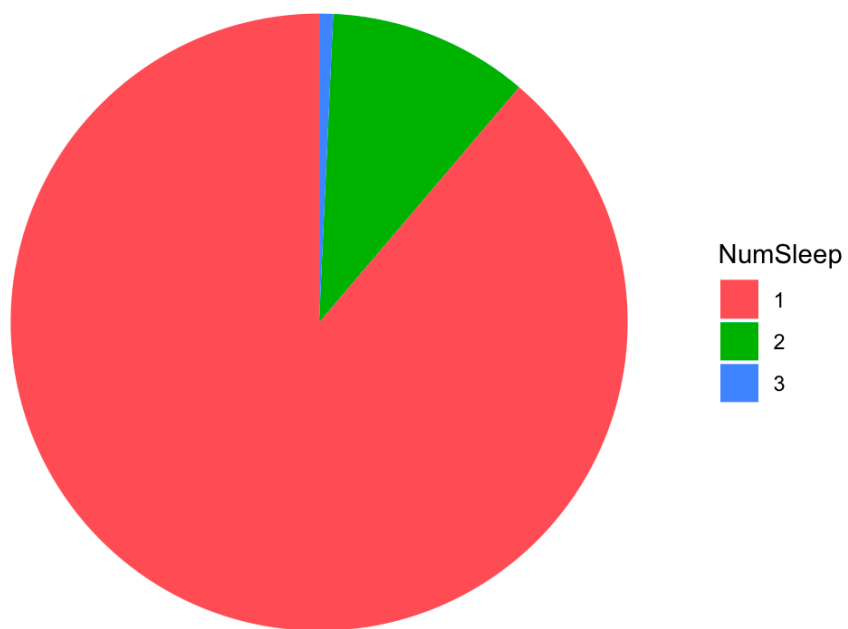


- There seems to be no correlation between daily calorie consumption and minutes during very active.

Sleep Day

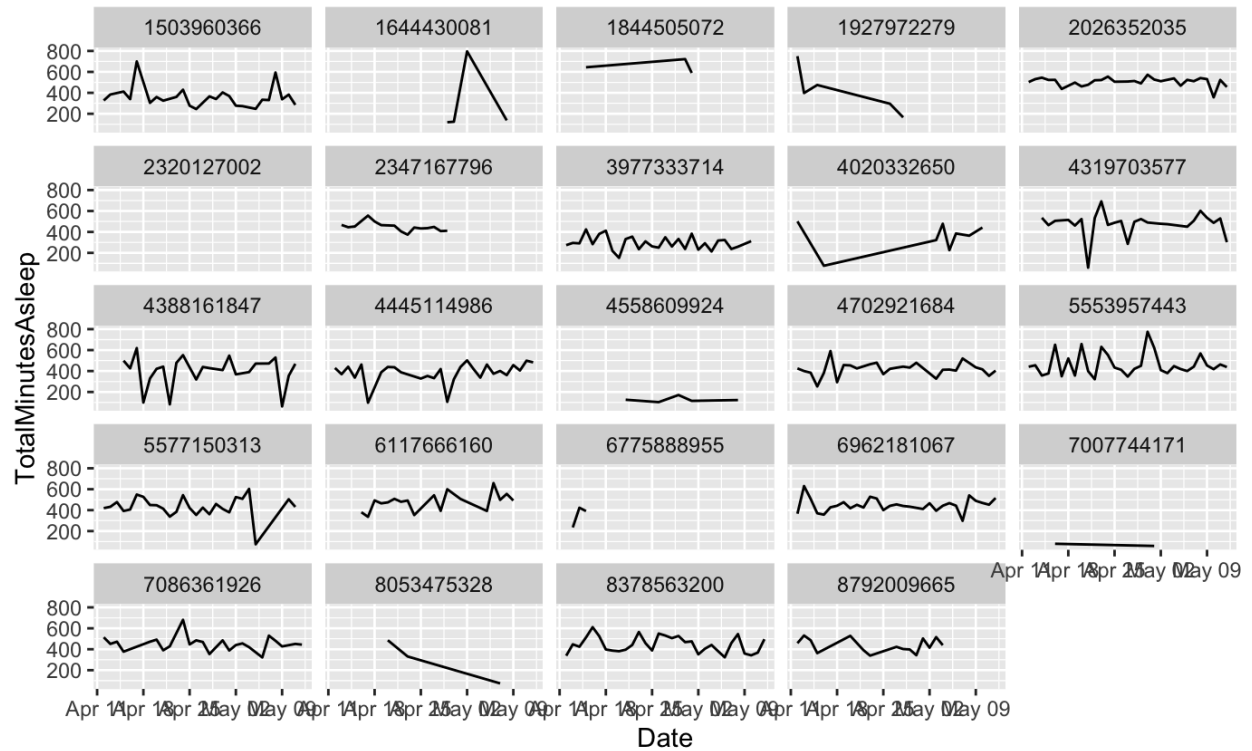
Number of sleep per day:

NumSleep <chr>	Count <int>	Rate <dbl>
1	364	0.887804878
2	43	0.104878049
3	3	0.007317073



- Number of sleep per day is only one in about 89 percent of days.
- Only 10 percent of the day was spent with multiple sleep.

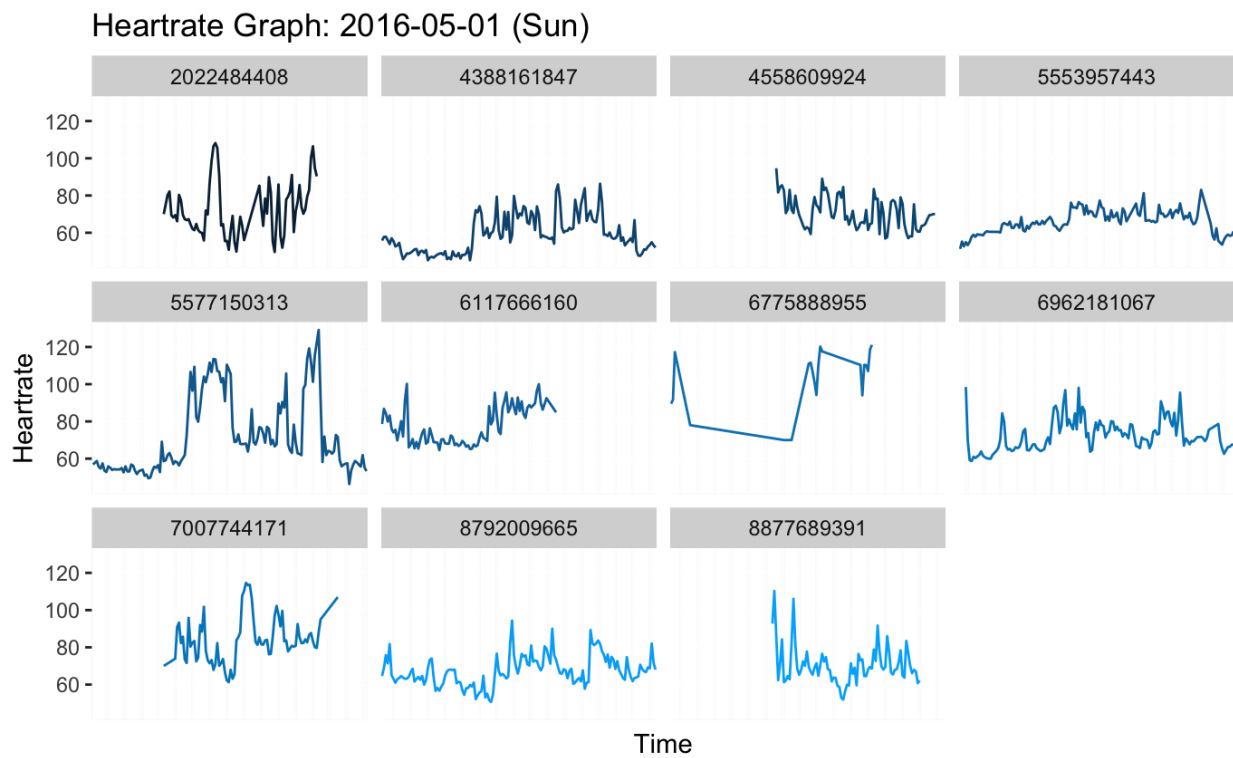
Daily sleep minutes per user:



- Sleep logs by several users are not correctly recorded.

Heart Rate

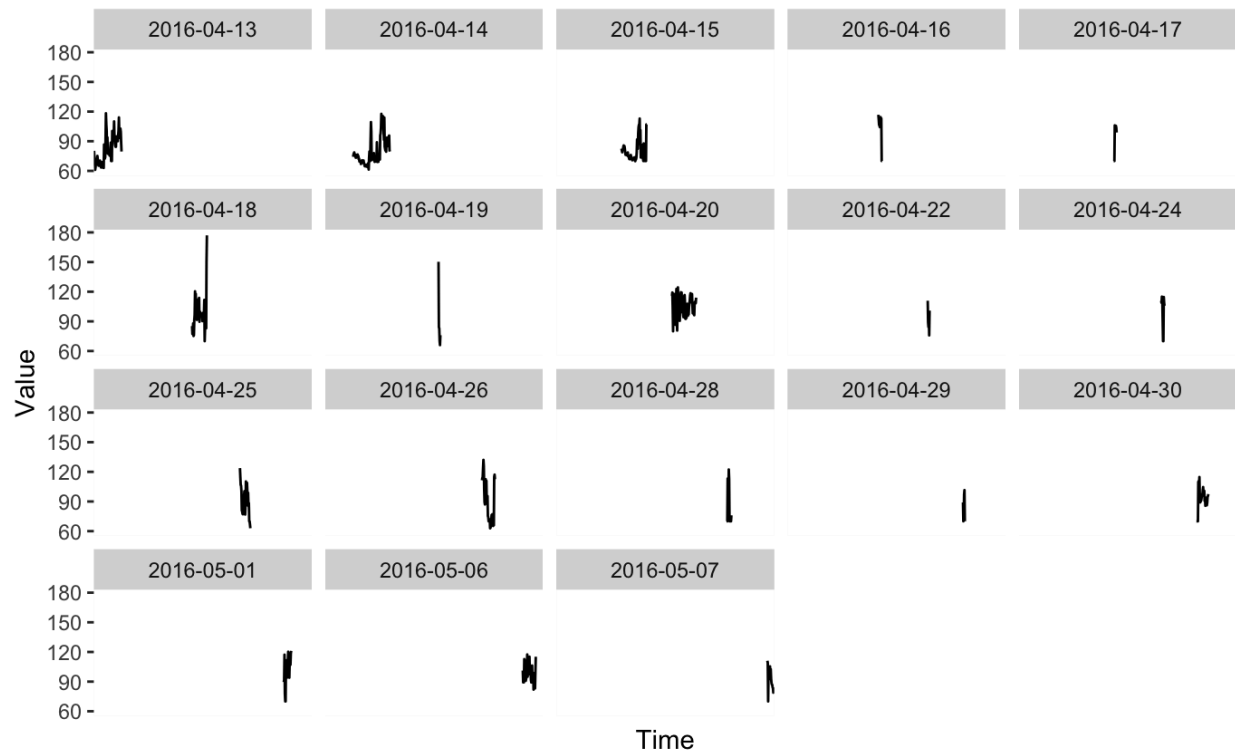
Heart rate of May 1, 2016 per user:



- It seems heart rate is correctly recorded except for the user 6775888955

Case study - user: 6775888955

Daily heart rate graph of the user



- For this user, the record of heart rate is limited.

Weight Log

Average weight log per user

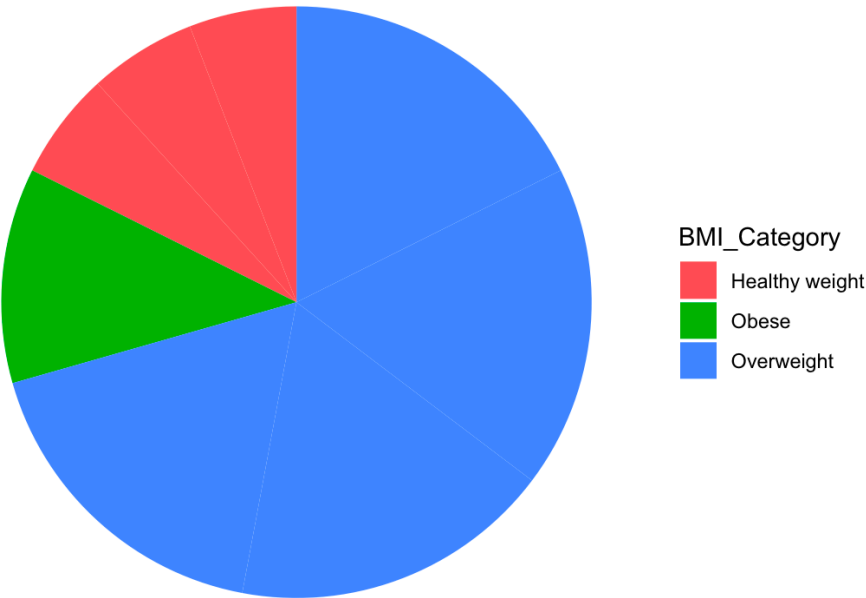
Id <dbl>	WeightKg <dbl>	BMI <dbl>
1503960366	52.60000	22.65000
1927972279	133.50000	47.54000
2873212765	57.00000	21.57000
4319703577	72.35000	27.41500
4558609924	69.64000	27.21400
5577150313	90.70000	28.00000
6962181067	61.55333	24.02800
8877689391	85.14583	25.48708

Average BMI and its category per user:

Id <dbl>	BMI <dbl>	BMI_Category <chr>
1503960366	22.65000	Healthy weight
1927972279	47.54000	Obese
2873212765	21.57000	Healthy weight
4319703577	27.41500	Overweight
4558609924	27.21400	Overweight
5577150313	28.00000	Overweight
6962181067	24.02800	Healthy weight
8877689391	25.48708	Overweight

Proportion of BMI categories

BMI_Category <chr>	Count <int>	Rate <dbl>
Healthy weight	3	0.375
Obese	1	0.125
Overweight	4	0.500



- Over 62 percent of participants are overweight.
- Over 10 percent of participants are obese.

Count of valid fat value : 2

- Only 2 times of fat value is recorded.