# Capstone2

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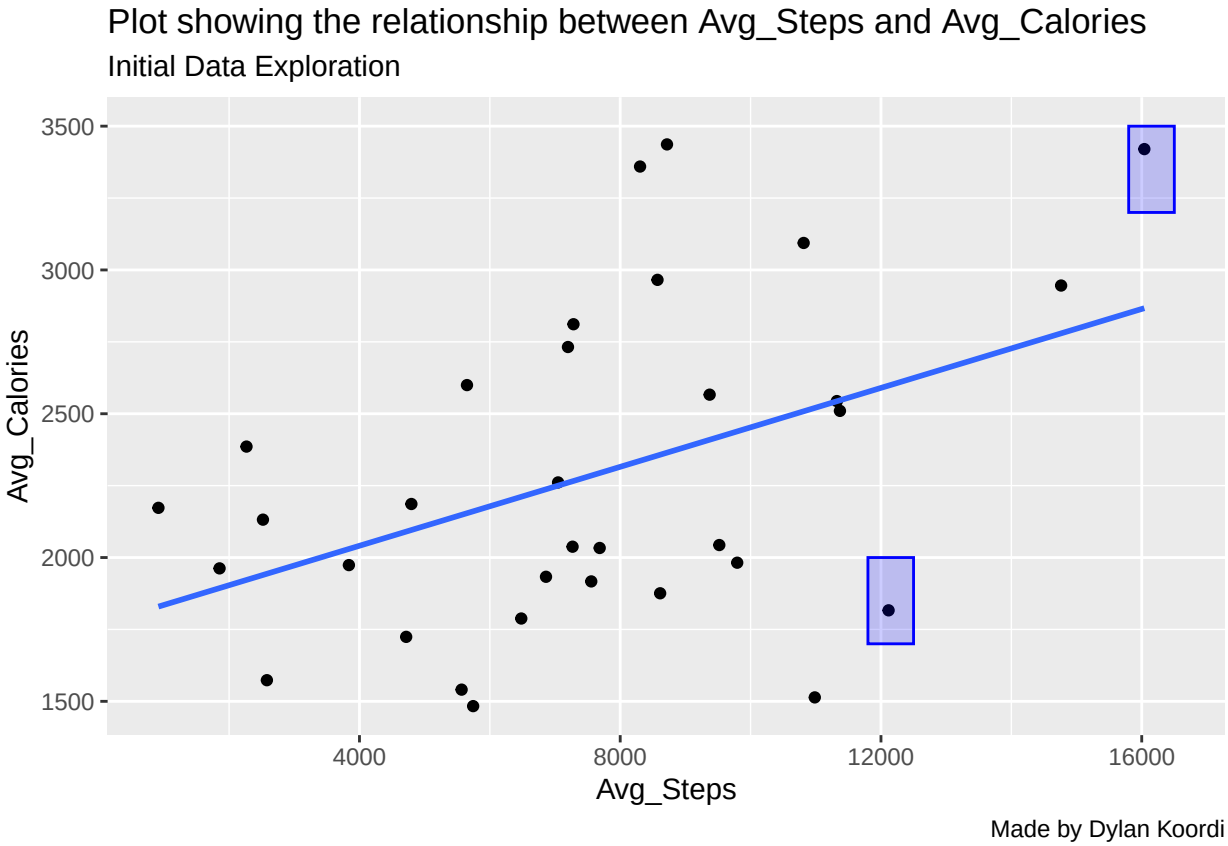
9/30/2021

## Associated Packages Used:

### Read in the data

Initial observation of data shows that there exists 940 observations consisting of 15 variables.

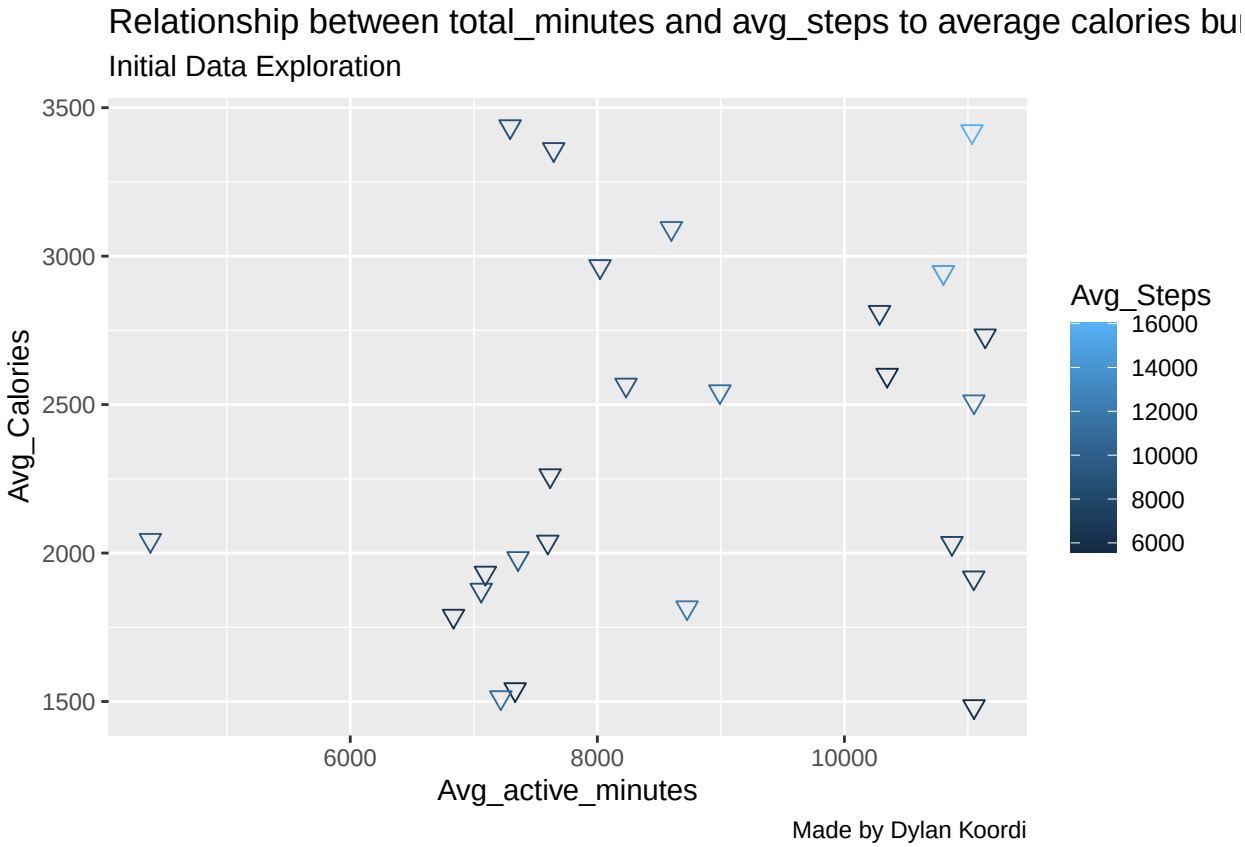
```
## `geom_smooth()` using formula 'y ~ x'
```




Plot shows that there is not a clear relationship between the average steps and average calories. Namely, an individual's combine steps does not directly lead to a higher average calories burnt. The highlighted portion of the diagram reflects points that support the relationship by in true, the other highlighted point on the bottom of the diagram reflects otherwise.

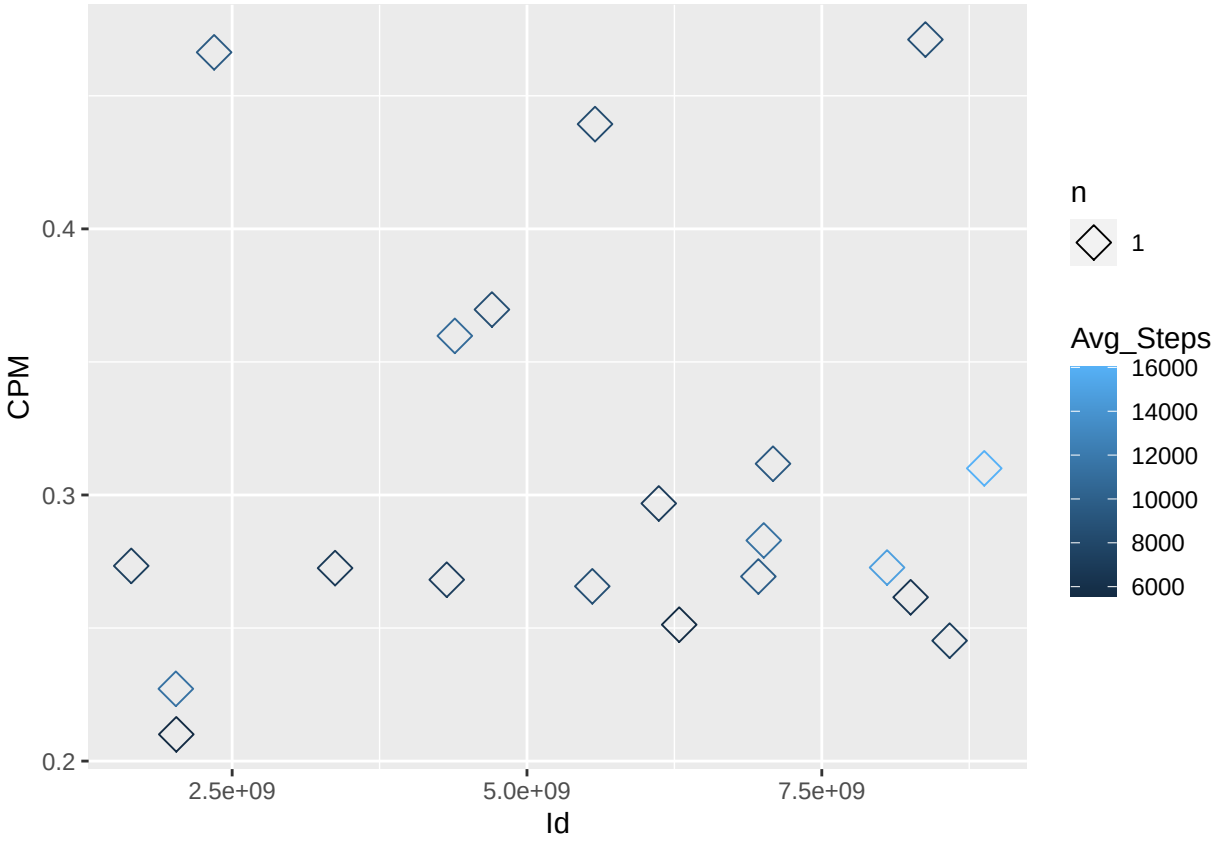
```
## Adding missing grouping variables: `Id`
```

If average steps and average calories does not have a direct relationship, does average calories and total time spent have any relation?




There is some association between active minutes and average calories burned. Namely the plot shows that for every increase in active minutes on the app, the greater the number of average calories burnt. While the trend is generally upward sloping, there are also a lot of outliers which may indicate that while individuals were active on the app, they may not actually be burning calories (or doing anything).

### Initial Data Exploration: Analyze Phase

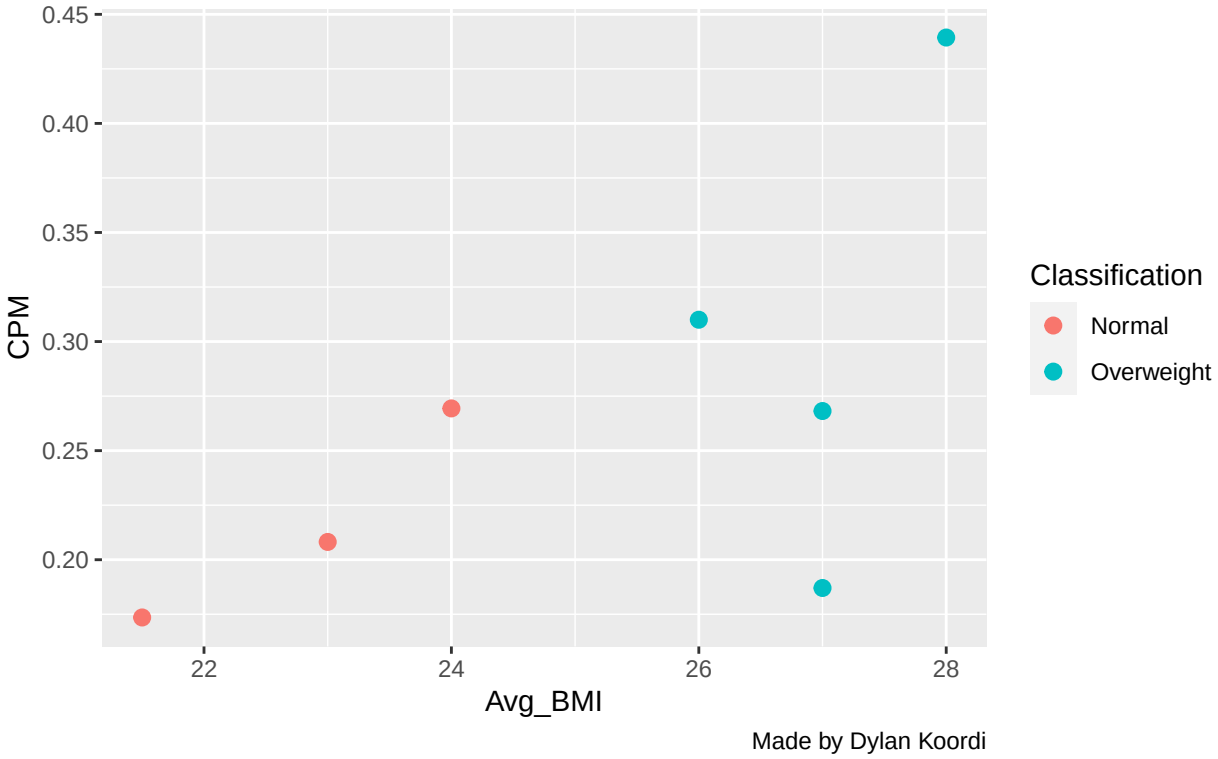



If we observe the the CPM for each individual in the system, the result holds. The calories per minute has no significant association with the avg_steps of the individual. For reference, the light blue points refers to individuals that have walked the highest average number of steps but in turn, their CPM calculated are not as high as the number of those that have a smaller number of steps, denoted formally by the darker shades of blue on the diagram.

```
## Adding missing grouping variables: `Id`
```

Evidence showing overweight has higher CPM than normal weighted indivi

Analysis

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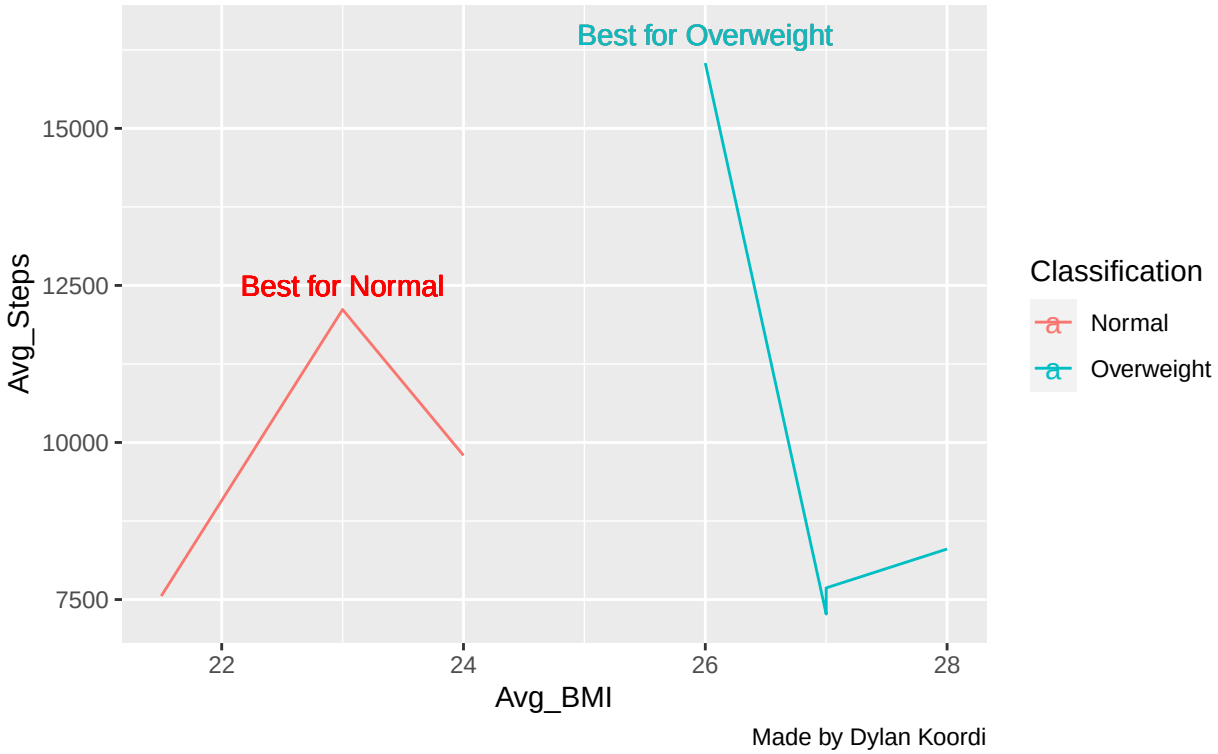
Lack of evidence supporting walking theory

Analysis

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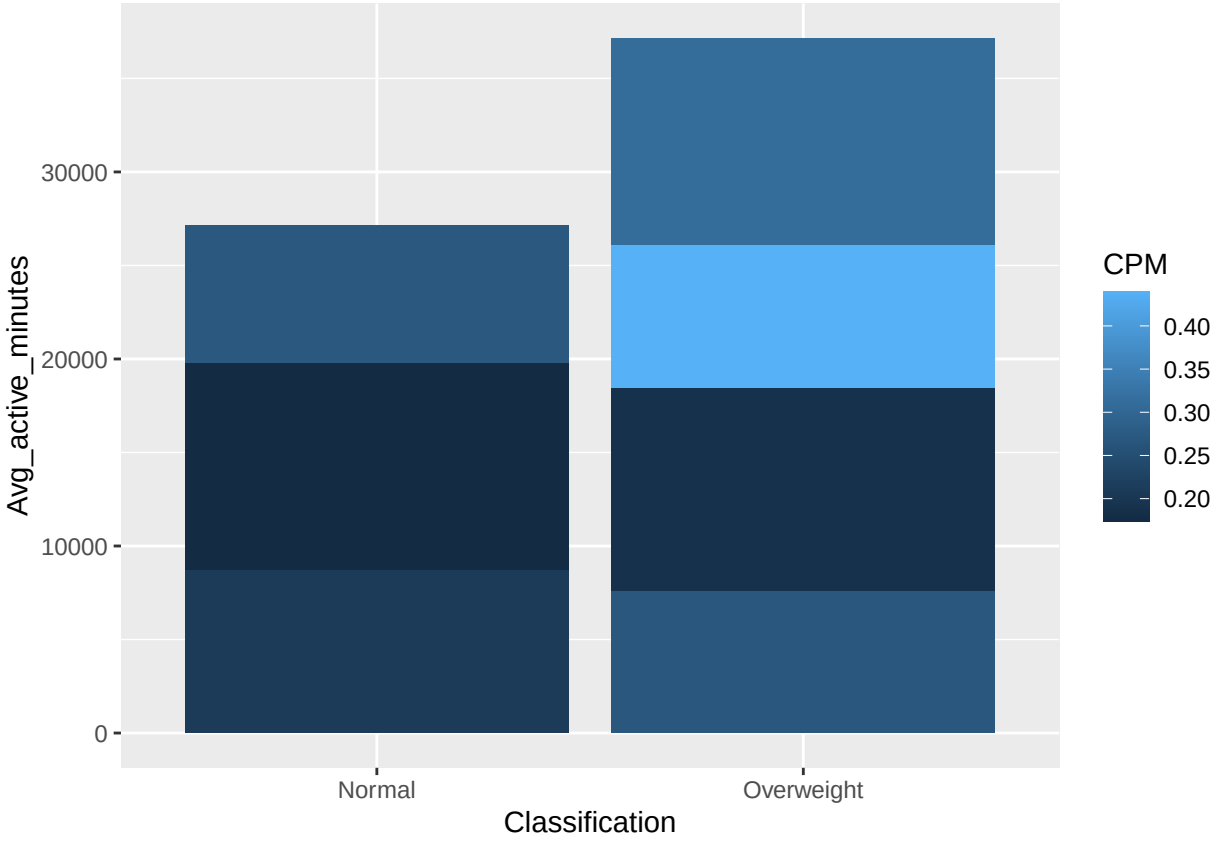
Plot shows that there does not exist any evidence supporting the claim that individuals that are classified as overweight are clearly walking more than those that are not.




Evidence shows that overweight individuals are actually using the app much more than those that are classified as normal. By virtue of the same experience, those that are overweight are actually experiencing a better change in their lives with respect to the CPM indicator scales. THe lighter end of the spectrum (blue) indicates that the peak individual obtained a max CPM of 0.4 while being overweight. This clearly indicates that the marketing strategy can be changed to focus more on overweight individuals vs normal individuals.