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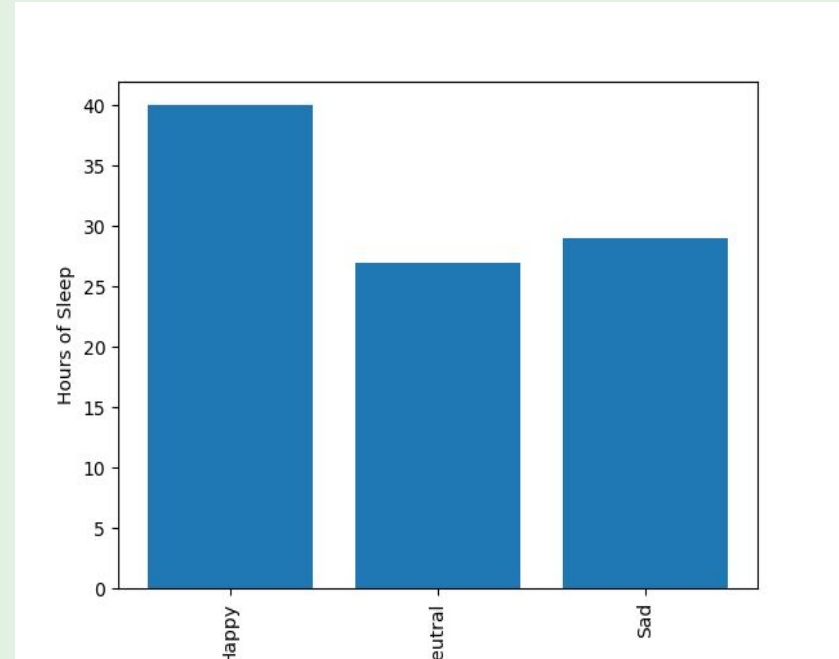
# Explanation of the Project

- ❑ Our project covered the fitness data trends of a brazilian student who wanted to track if working out helps a person become more active overall
- ❑ We looked at many of the different data points in the data set including his mood, the amount of calories he burned, the amount of time he slept and the amount of steps he took per day
- ❑ The person recording his progress focused primarily on their step count per day
- ❑ We then compared all these data points to each other in order to answer our overall question: Does Working Out Help a Person Become More Active Overall?



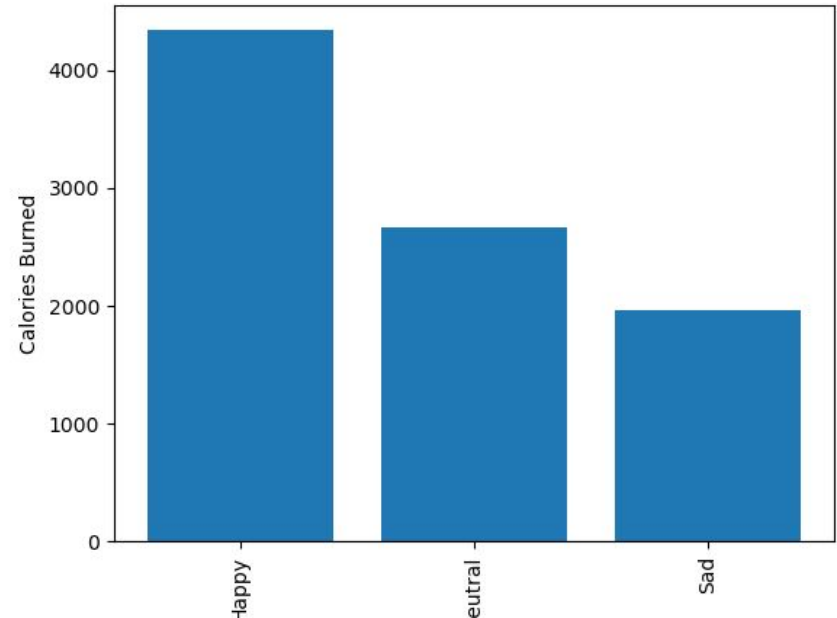
# Can the amount you sleep affect your mood?

- ❑ Sleep can affect your mood
- ❑ In this study it was very clear that more he slept the happier he was
- ❑ Looking at the bar chart on the right we can see that the more he slept the happier he was
- ❑ It is also interesting that sad and neutral are so close to each other really showing that unless he slept enough he was not happy



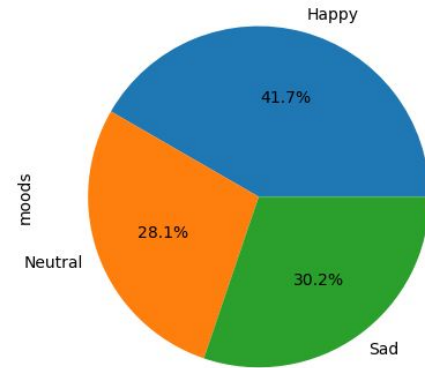
# Can the calories burned affect your mood?

- ❑ Mood can affect how many calories you burn
- ❑ In this study it is clear that the happier he was the more calories he was able to burn
- ❑ It is also clear that the sadder he felt the less calories he burned
- ❑ The chart to the right really shows that if he was happy he burned calories, when he felt neutral he burned a decent amount of calories, and when he felt sad he didn't burn half as many calories as when he was happy



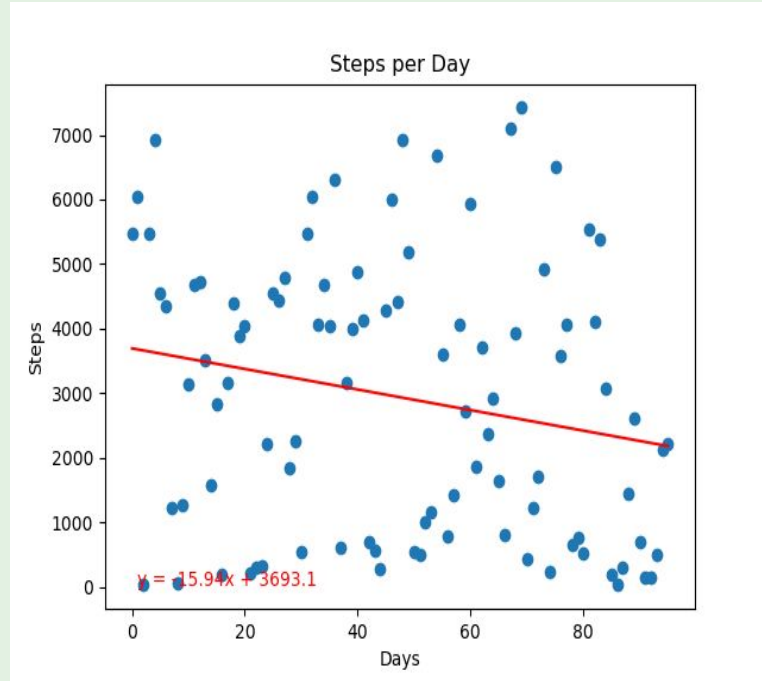
# A look at his different moods

- ❏ Activity status affects overall mood
- ❏ Previous slides show that he is overall happy because he is burning more calories and sleeping more
- ❏ The graph to the right shows his moods over the past three months.



# A look at the amount of Steps per Day

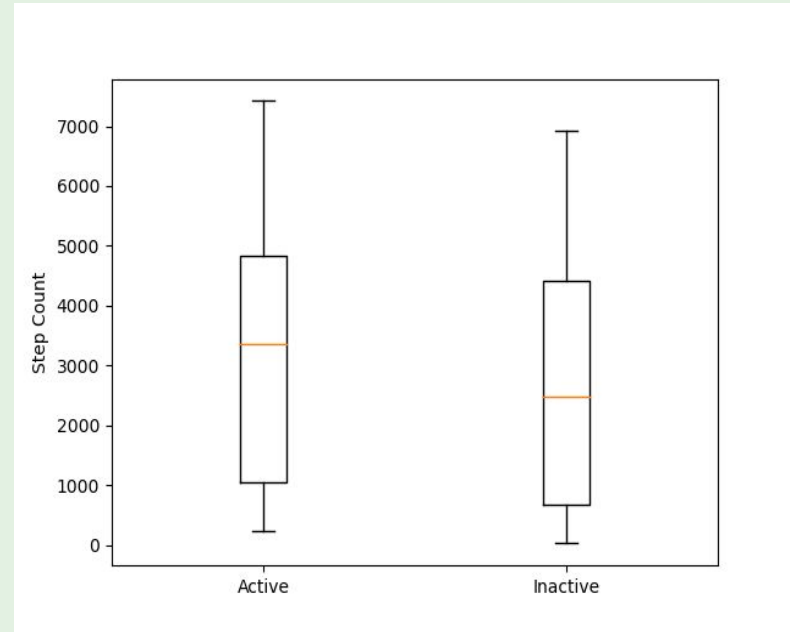
- ❑ Used linear regression to try and find the best straight line to fit the data
- ❑ Steps per day are too wide spread
- ❑ None/Low Correlation (r-squared value close to 0)



# Does The Amount Of Steps Affect Your Feeling Of Activeness?

- ❑ There is a positive relationship between step count and feelings of activeness.
- ❑ The Active group had a higher mean and interquartile range than the inactive group suggesting that taking more steps is associated with feeling more active.

Active:	Inactive:
<b>Lower:</b> 1,037	<b>Lower:</b> 663.75
<b>Upper:</b> 4,843	<b>Upper:</b> 4,411.5
<b>Interquartile Range:</b> 3,806	<b>Interquartile Range:</b> 3,747.75
<b>Mean:</b> 3,226.57	<b>Mean:</b> 2,709.89
<b>Outlier Range:</b> -4,672 to 10,552	<b>Outlier Range:</b> -4,957.88 to 10,033.13



# Can Mood Affect The Amount Of Steps You Take In A Day?

- ❑ Mood does have an affect on step count.
- ❑ The happy group had a higher mean and interquartile range than the neutral and sad groups. Which shows that this individual tends to be more active when he's in a good mood.

**Happy:**  
**Lower:**  
1,314.5

**Upper:**  
4,804.25

**Interquartile Range:**  
3,489.75

**Mean:**  
3,392.73

**Outlier Range:**  
-3,920.13 to  
10,038.88

**Neutral:**  
**Lower:**  
1,339

**Upper:**  
4,245.5

**Interquartile Range:**  
2,906.5

**Mean:**  
3,153.73

**Outlier Range:**  
-3,020.75 to  
8,605.25

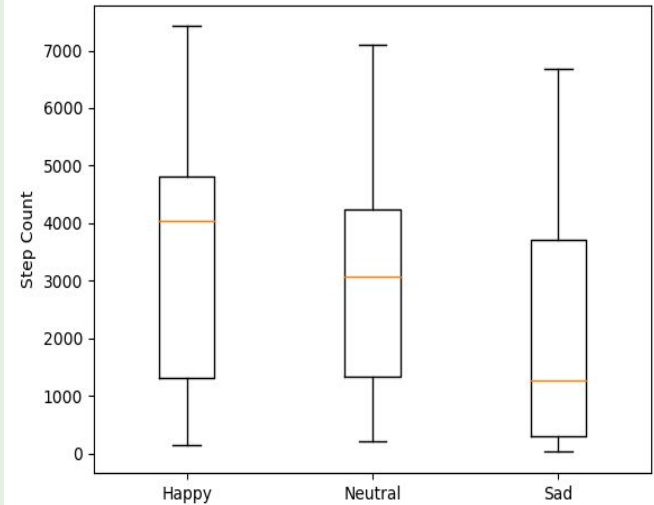
**Sad:**  
**Lower:** 299

**Upper:**  
3,721

**Interquartile Range:**  
3,422

**Mean:**  
2,103.07

**Outlier Range:**  
-4,834 to  
8,854





# Final Takeaways: Does Working Out Help a Person Become More Active Overall?

Based on all the observed, the person used a Samsung Health Application for about three months to track his activeness (step count/calories burned). He also tracked how he felt everyday and how much sleep he was getting. Overall you can see over the three months he was happy and more active. Through the data we can draw the conclusion that by working out he became more active in those three months.

