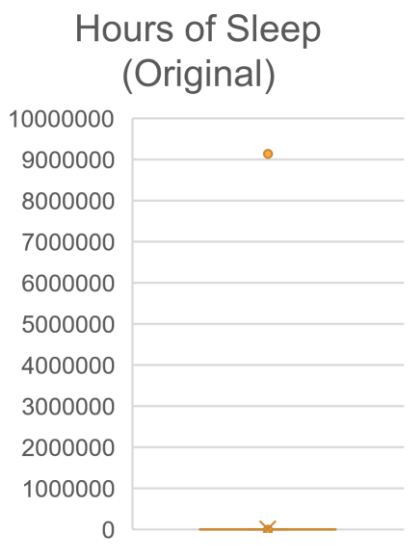
Udacity Business Analyst Nanodegree

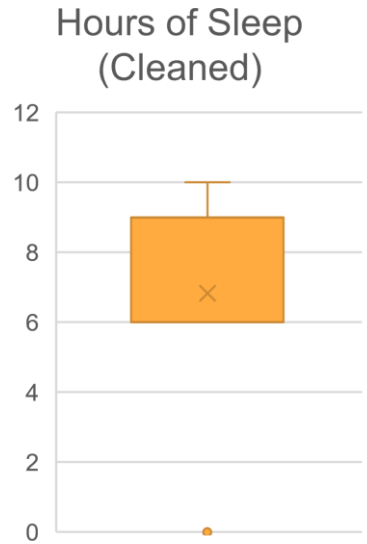
Project One

Analysis of Udacity Student Survey

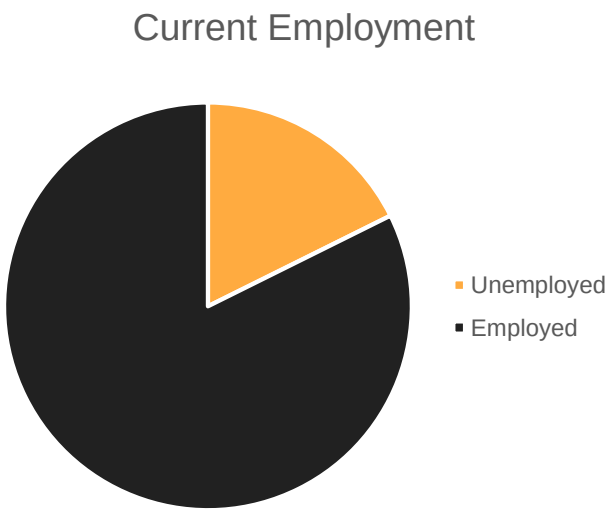
This report explores student's current employment (i.e. employed or unemployed), as well as two indicators that are correlated with his/her employment. Please be aware that without a double-blind and controlled experiment, our conclusions only suggests correlation, instead of any causal relationship.

How many hours does a student get per night? Are there any patterns? What about their current employment?





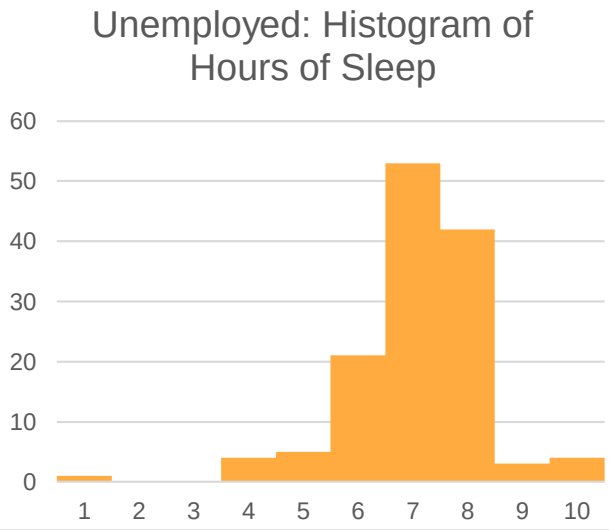
Hours of Sleep (Cleaned)	
Mean	6.90
Mode	7
Minimum	1
Q1	6
Median	7
Q3	8
Maximum	10

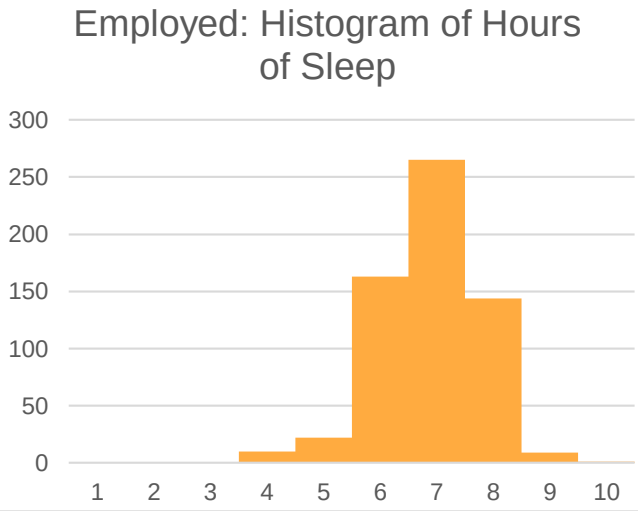


As we can see from the first box chart, the column “Hours of Sleep” is quite noisy. People normally sleep less than 14 hours per day! So we replaced values longer than 14 hours with “N/A” in our spreadsheet, and get the second box chart and the table of descriptive statistics. As is shown, most of Udacity students sleep from 6 to 8 hours per night.

In the pie chart, we can see that less than 20% of Udacity is currently unemployed, while over 80% of them exmployed.

Does the average hours of sleep a student get per night vary with his/her current employment?



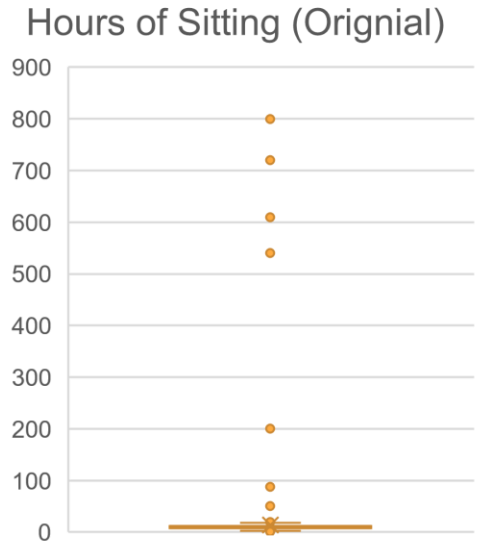


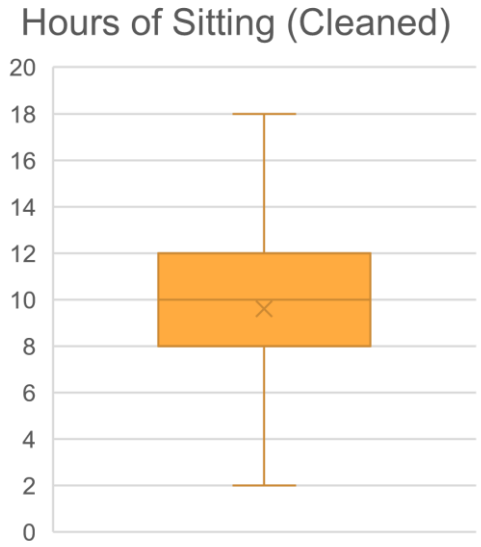
Std Dev: Hours of Sleep	
Unemployed	1.237330416
Employed	0.922402887

As we can see from the two histograms, the average hours of sleep by both groups (the unemployed and the employed) almost the same, at around 7 hours. However, for the unemployed group, the histogram is more spread out, that is, there are more extreme values at both end of the histogram. For the unemployed group, the hours of sleep ranges from 1 to 10, but for the employed group, only 4 to 10. This might suggest that the unemployed student has more irregularity in his/her daily life.

We the calculated the standard deviation for the two groups. As is consistent with the histogram, the unemployed group has a higher standard deviation.

How many hours is a student sitting without physical activity per day? Are there any patterns?



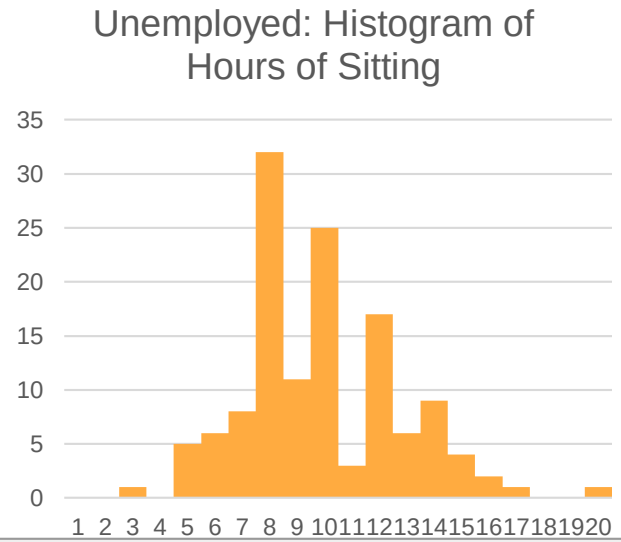


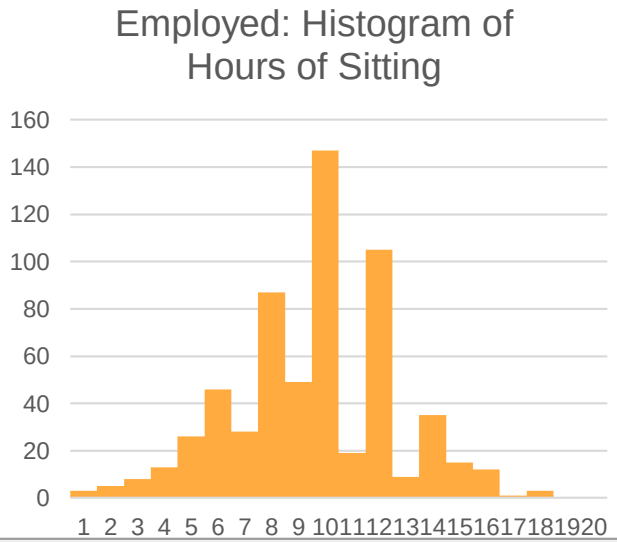
Hours of Sitting (Cleaned)	
Mean	9.65
Mode	10
Minimun	1
Q1	8
Median	10
Q3	12
Maximun	20

I investigated students' hour of sitting per day, in the same way I investigated their hours of sleep per night. Again, the data is quite noise and have some extreme outliers. Hours of sitting longer than 23 or equal to zero are replaced with "N/A".

The second box chart and the table after it show the descriptive statistics of students' hours of sitting. Most of them kept sitting for about 8 to 12 hours a day. Many researches published online suggest that a sedentary life increases your risks of chronic diseases and cognitive decline. We might consider promoting more physical activity among our students.

Does the average hours of sleep a student get per night vary with his/her current employment?





	Unemployed	Employed
Mean	9.89	9.59
Mode	8	10
Std Dev	2.87	3.00
Minimum	3	1
Q1	8	8
Median	10	10
Q3	12	12
Maximum	20	18

The range of hours of sitting for each group is 3 to 20 for the unemployed and 1 to 18 for the employed. However, the mean, median and mode for each group suggests that for most of the students, their hours of sitting are almost the same, regardless of whether they are employed or not. Anyway, the difference in the ranges of both groups still suggests that the employed group might have less individuals with extremely sedentary life style (i.e. those who kept sitting for over 18 hours per day).

In addition, the standard deviation of the employed group is slightly higher, which suggest that this group has more varied life styles. This might be correlated with the difference of employers. Some employers might think of their empoyee's helath more. But this is purely guessing!

The End

Thanks for watching! ☺

Works Cited:

N/A