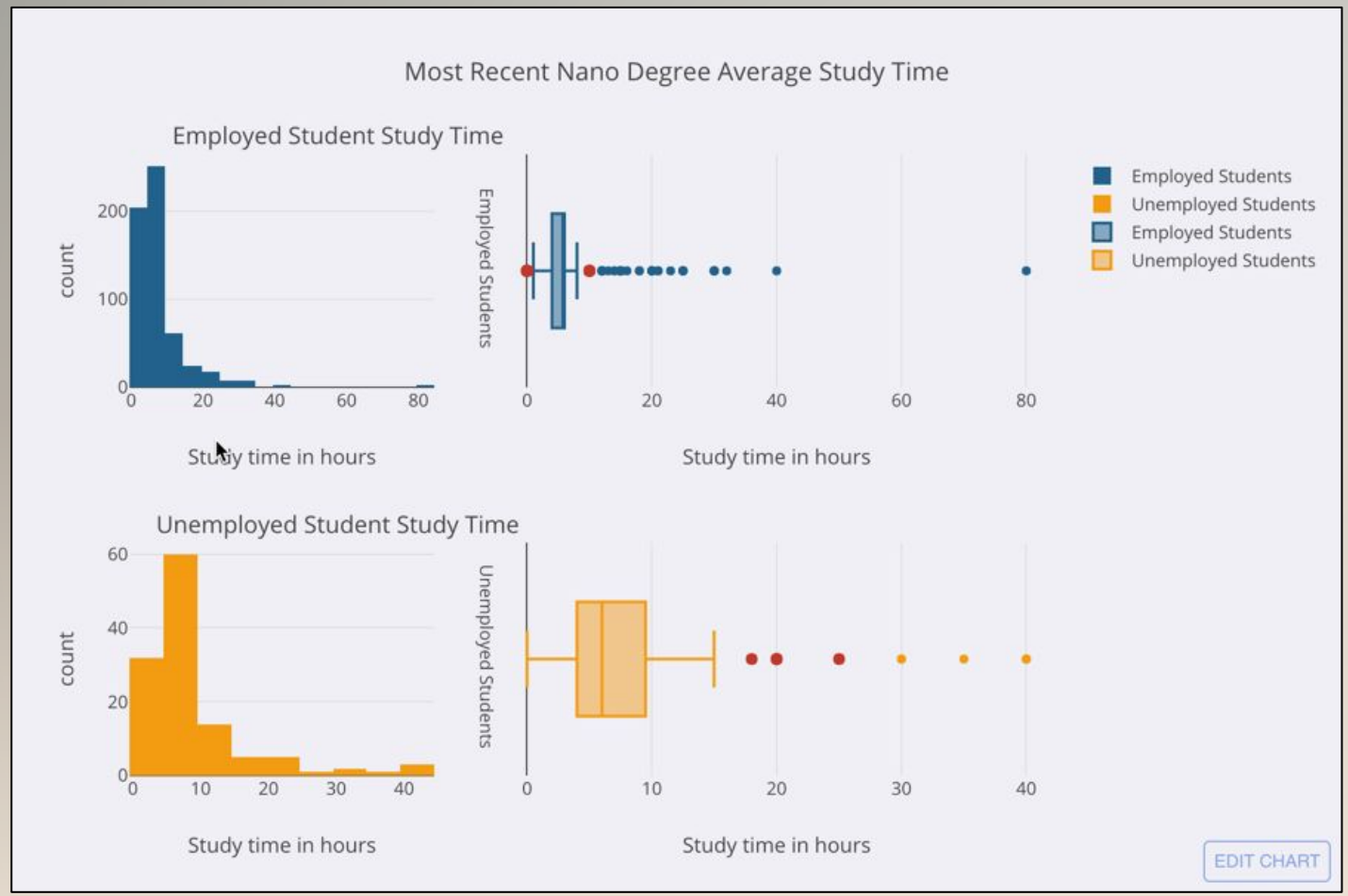
UDACITY

Data Foundation Nanodegree

Project 2: Analyze Survey Results

This data from Udacity students who only responded the survey.

How being employed affect study time



The graph shows us the employed and unemployed students study time differences from Udacity survey responds.
Each colour represents employed and unemployed student study time with histogram and box plot together.

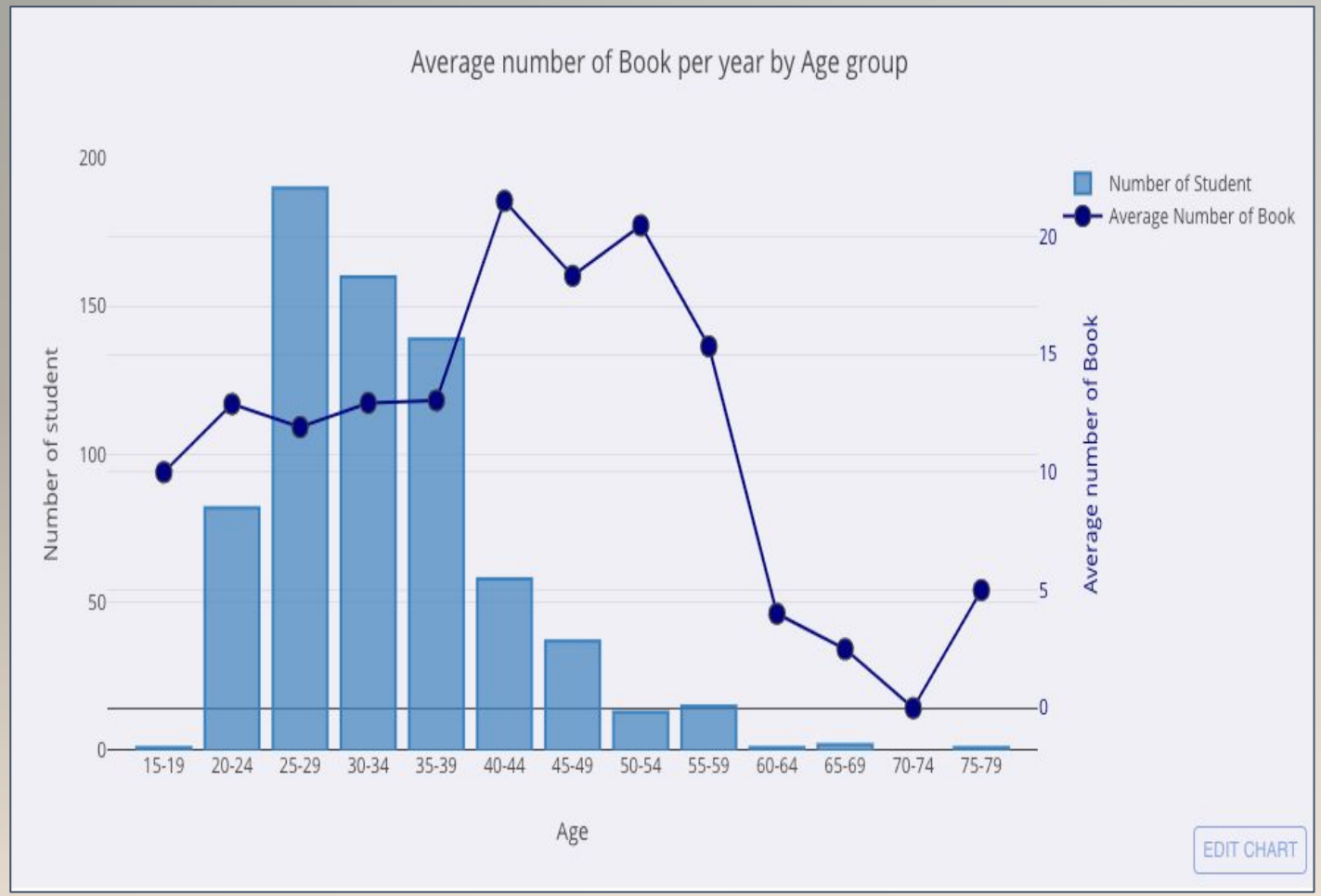
As we can see a right-skewed for two distribution and we know the mean is bigger than the median for both the distributions.
In our data, both employed and unemployed students study time medians and modes are the same and equal to 6.

However, the standard deviation for the employed student is approximate 6.4, and the unemployed student is approximate 7.8. This shows bigger variability for unemployed students.

When we choose max number 40 for both distributions, then the standard deviation being almost the same, and median and mode are the same for both distributions, so with the result employed and unemployed study time are similar.

*Link: Plotly interactive graph

How is different reading habit for age groups



The graph includes two different charts.

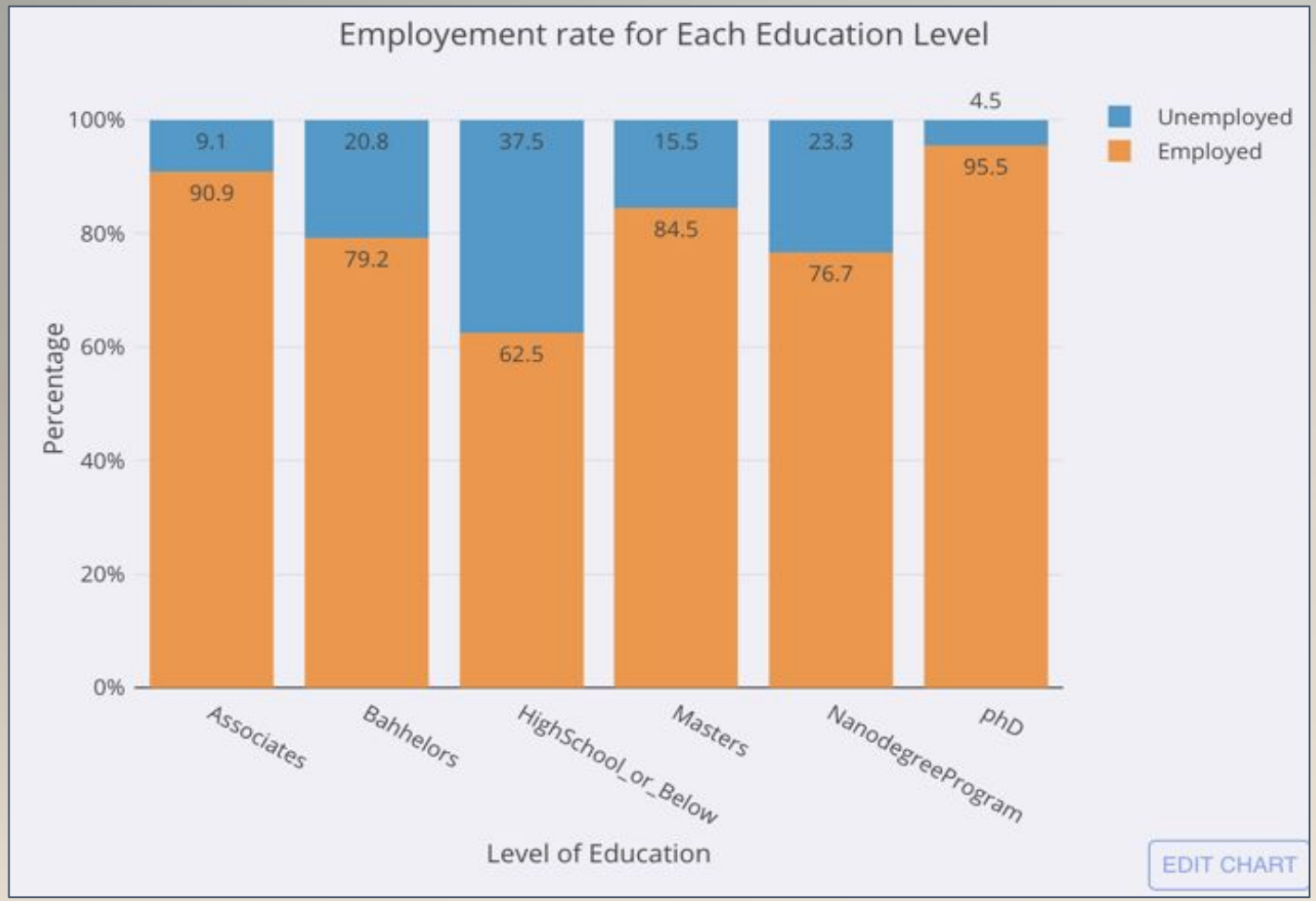
The Bar chart shows us the number of student per age group (each bin contains 5 years of age range), that start between 15-19 year age and include only one student who is 19 years old.
We can see a right skewed in the chart that shows us number of student for age group the mean(33.2) is bigger than the median(32). The mode is 29 age for data that 46 student is 29 years old.

The line chart shows the average number of books for each age range students average. The y axis of the line chart places the right size of the graph.

As we can see the average number of reading or listening the book slightly increasing between 15-19 age and 30-39 years and we can see a spike in 40-44 years old age range which is the average number of the reading book is 21.5 for this range, and it is the highest point in this chart.
Also, we can see a significant decreasing after 50-54 age years old range for the average reading book.
Unfortunately after 50-54 years old age range we do not have many data so we cannot say about after this age group but before this age group we can say reading time slightly increasing from our result.

*Link: Plotly interactive graph

How education level affect employment



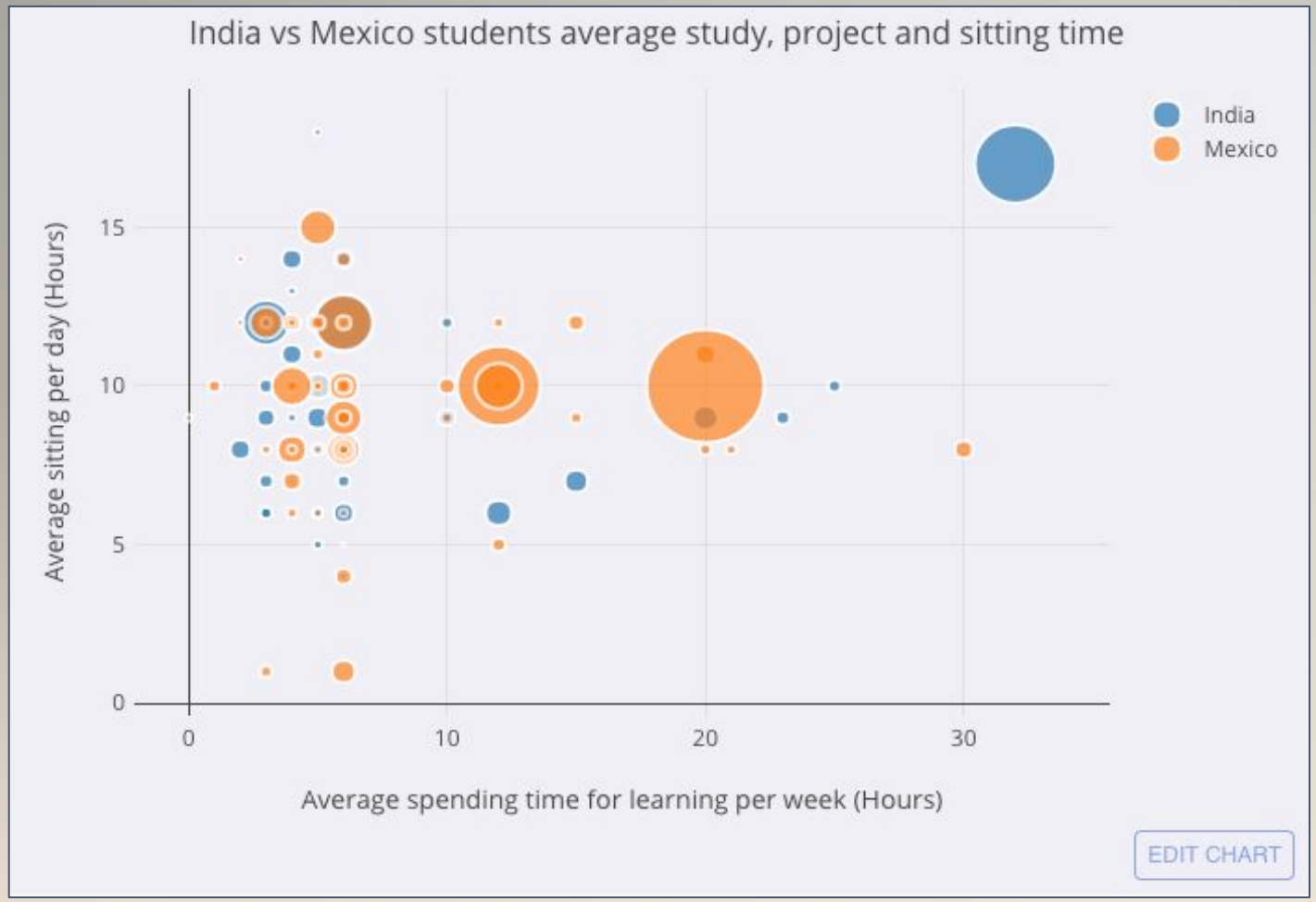
The graph shows us the difference of employed/unemployed rate between each educational level.
Stacked bar chart helps us to see the different values of data as a percentage

The number of students are not same for each educational level which most student in our data from Master students and the total number is 290, and smallest educational level of students are Associates which we have only 11 students.

As we can see the most employed rate our data is PhD students which 95.5% and the lowest employed rate is “High School or Below ” level which is 62.5% so we can say according to our data higher education student most likely being employed.

Another point is in our data is that the highest education level Nanodegree Program employed rate is almost same Bachelor degree employed rate.

Do different location students have different study habit



The graph allows us to compare three different dimensions in one graph.
We have the third dimension which is the “average hour for completing project in recent nanodegree project” and we can see this dimension with bubble size that shows the difference between two countries

India project completion time the mean is 33.2 and the median is 10 and Mexico project completion time the mean is 50.8 and the median is 12 that both data tells us a right-skewed data.
The standard deviation of project completion time for India is 76.9 and for Mexico is 142.6 which tells us about the Mexico average project completion time range is bigger than India.

Also, we can see two small clusters for study hours. Most students are studying between 2 - 6 hours and 6 hours is mode of the “average spending time for learning per week”.
Even Though, weekly study time is almost same but as we can see spending time for project is high for Mexico students so according to our result Mexico students spending more time on projects.

*Link: Plotly interactive graph