

# FINAL REPORT

‘A PICTURE IS WORTH A THOUSAND WORDS’

Team members – Group 5:

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## INTRODUCTION:

We have created a Dashboard, using our dataset from the UCI machine learning repository. This dataset is known as "Census Income" dataset. We have used the data against each other in various charts to answer our questions. This report explains a scenario with one sector against one occupation.

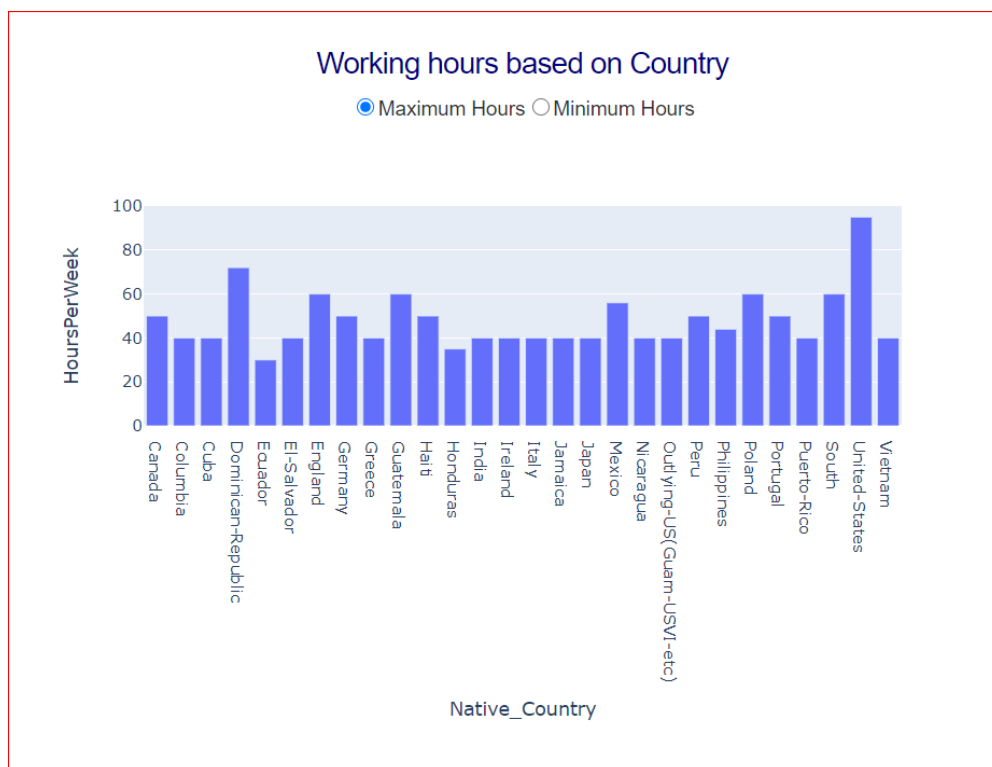
Source Dataset: <http://mlr.cs.umass.edu/ml/datasets/Adult>

As the first step in our dashboard we request the user to select a sector and an occupation from the given list.

For Example: Sector could be "Private" and the occupation could be "Handlers-Cleaners"

## CHART 1 - WORKING HOURS BASED ON COUNTRY:

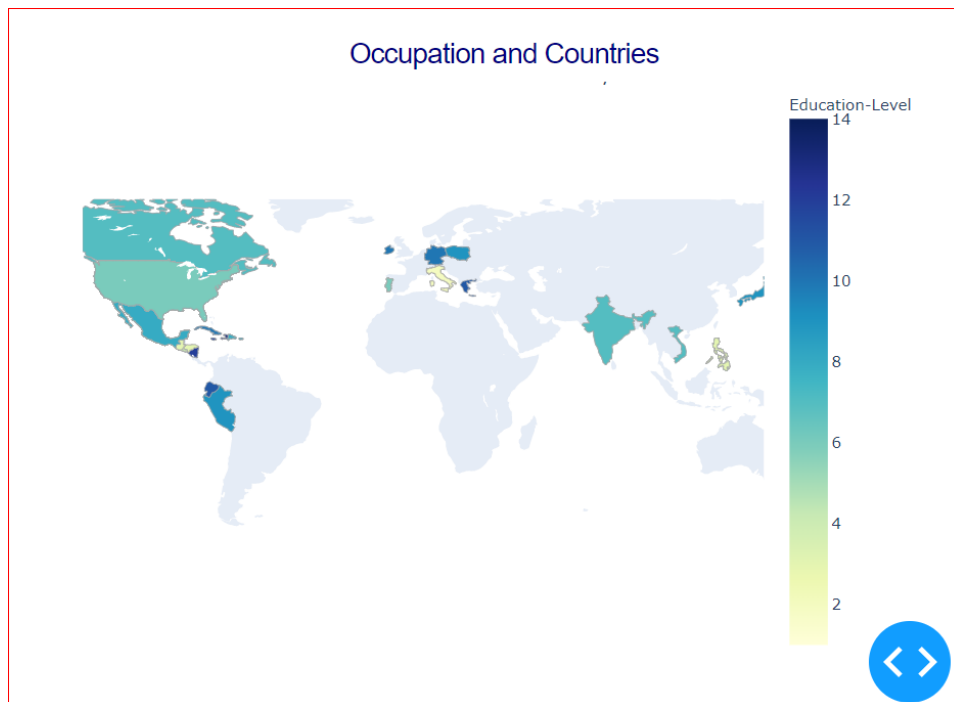
We have created a bar chart with Country in the x-axis and the number of hours worked per week in the y-axis. With the help of radio button, we can differentiate between the maximum and the minimum number of hours worked. From this chart, based on the dataset, we can understand the working hours in different countries.



## CHART 2 – OCCUPATION AND COUNTRIES:

We have created a map to display the countries that have the occupation that we have chosen (handlers-cleaners).

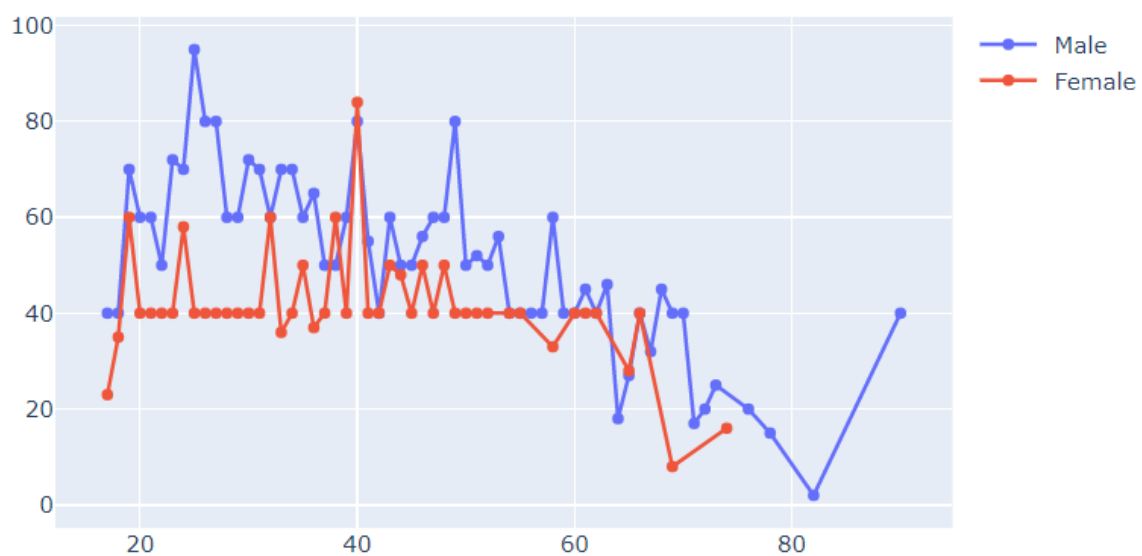
From this map we can understand that the occupation is being done in various countries with different level of education based on this dataset. This also answers our question of what education level is required in various countries to do this occupation in Private sector.



## CHART 4 – WORKING HOURS AND AGE:

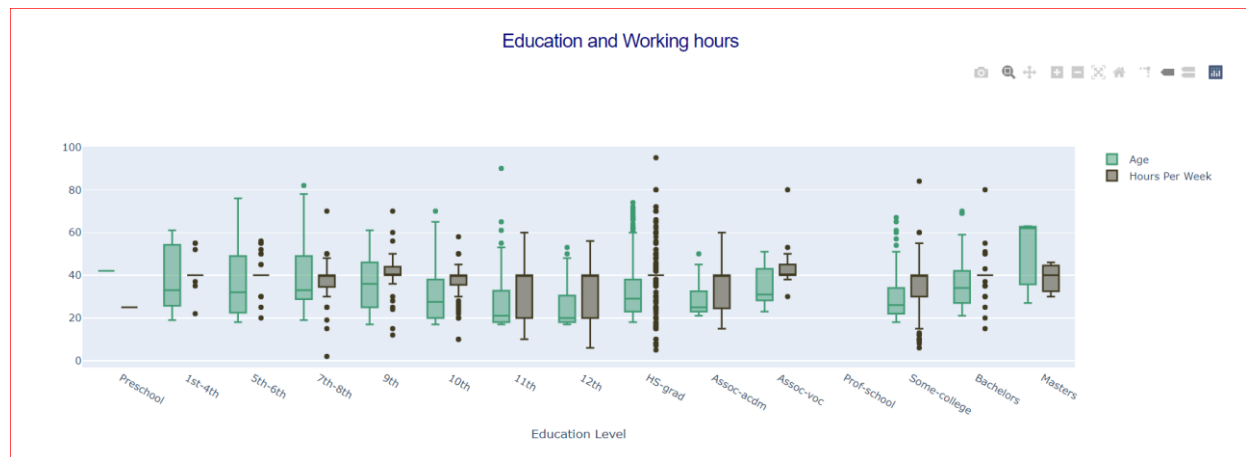
We have created a line chart with x-axis as age and y-axis as hours, against the gender. We have found that Men, work more hours and until they are older when compared to women in the occupation.

Working hours and age



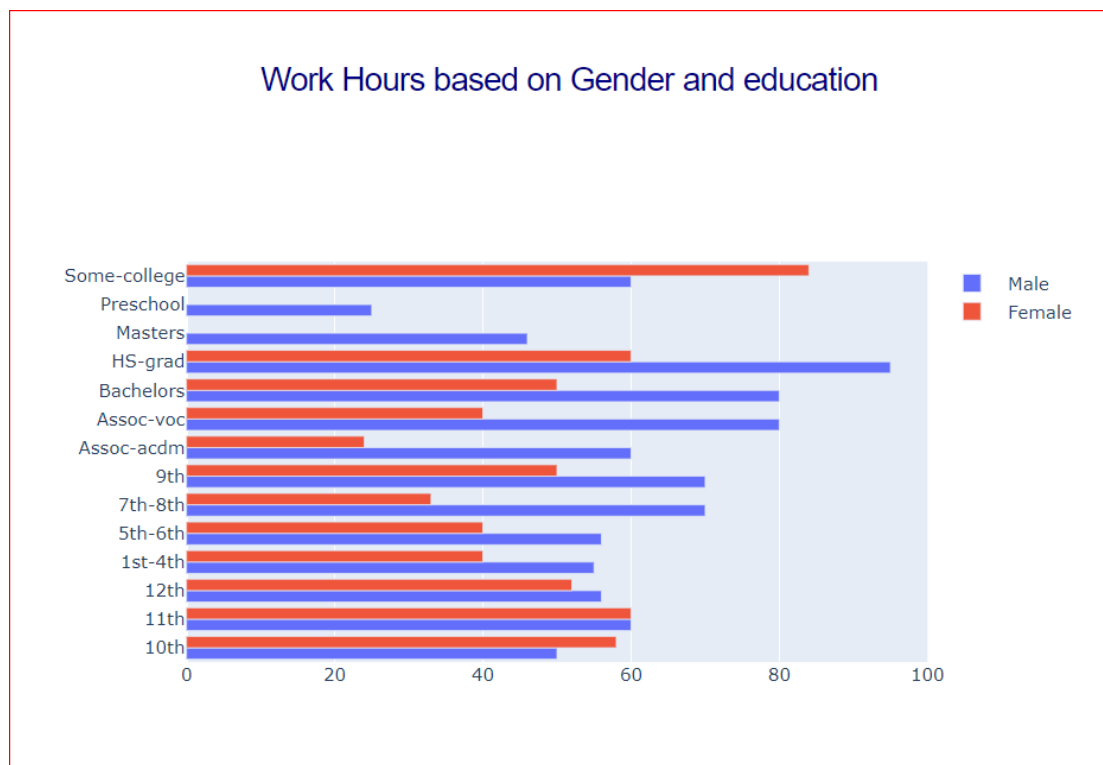
## CHART 5 - EDUCATION AND WORKING HOURS:

We have created a box plot for education level and working hours with respect to age. From this chart we can clearly see that the Mean working hours are common across all education levels except for select professions. Also, we can see that in most cases the younger age doesn't imply longer working hours regardless of the education level.



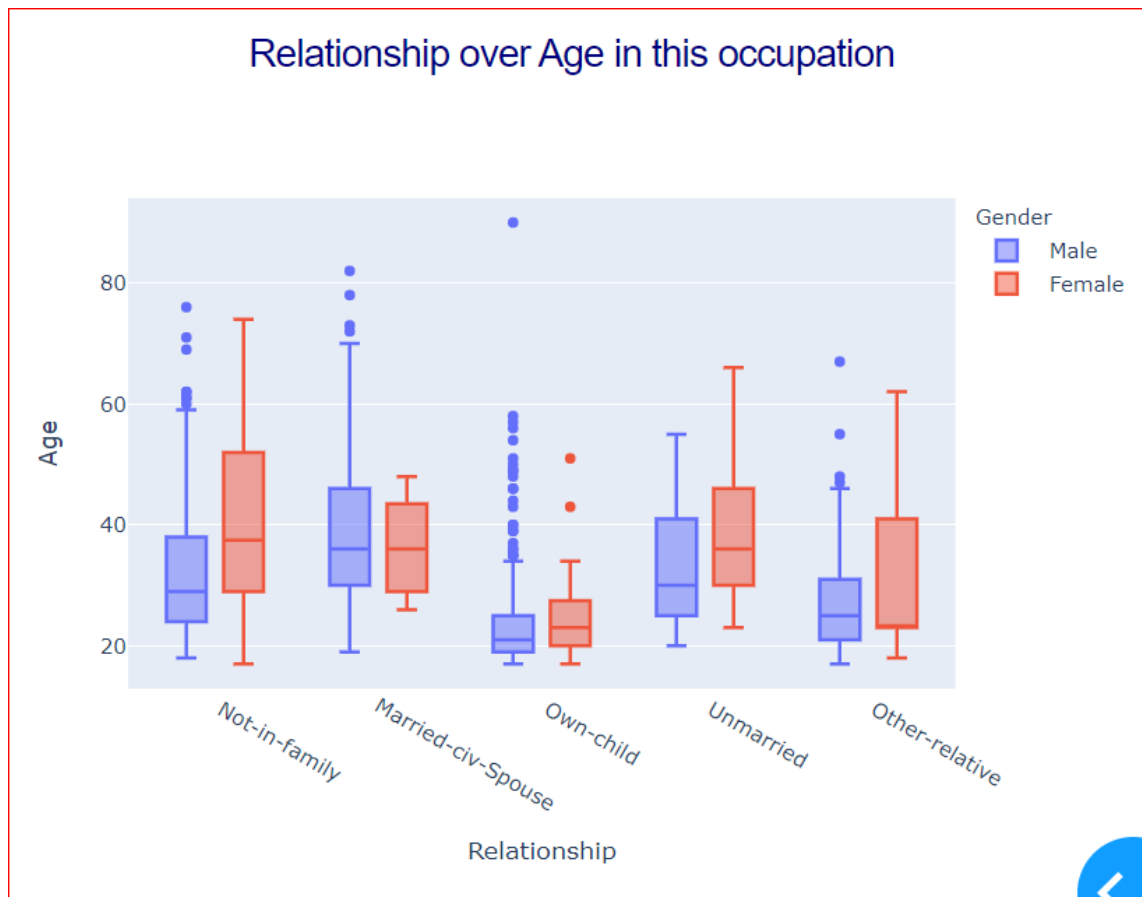
## CHART 6 - WORK HOURS BASED ON GENDER AND EDUCATION:

We have created a horizontal bar chart, sorted based on the education level to see which gender, Men or Women who works for more hours. We found that women with college degree tend to work more hours than male. But in all the other cases of education level, male works more.



## CHART 7 - RELATIONSHIP OVER AGE IN THIS OCCUPATION:

We have created a box plot with relationship and age based on the gender. We have found that women who are not in family or unmarried tend to work until they are older when compared to the married women in this occupation.



## CHART 8 - RELATIONSHIP BETWEEN EARNING, WORKING HOURS, EDUCATION AND AGE:

We have created a scatter plot whose size varies by education level, colour by earnings. We have made x-axis to be the age and y-axis to be hours per week. For the specific occupation and the given scenario, we have found that People who are single that is never-married, divorced or widowed tend to work more hours even though the salary is  $\leq 50$  k.



# THANK YOU