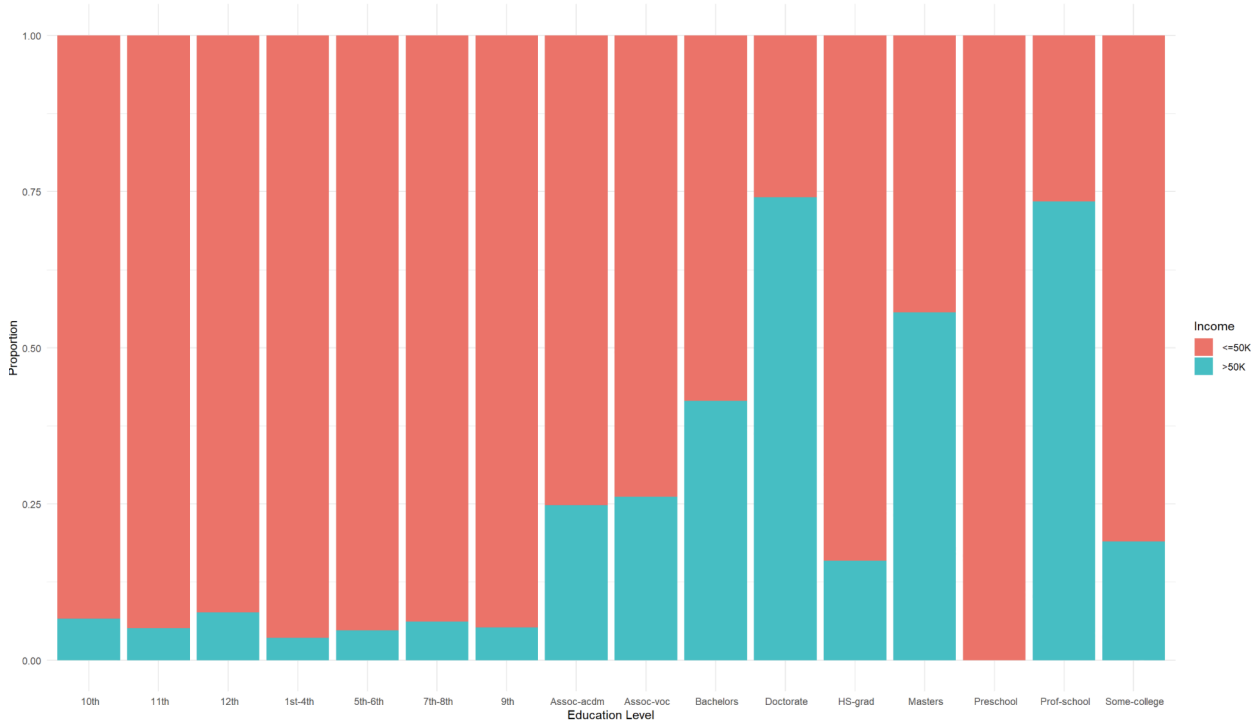
DS 202 FINAL DRAFT

- How does education level affect income?



In our analysis of the impact of education on income, we observe a significant relationship as depicted in the bar chart. It is evident that individuals with higher educational attainments, particularly those with a Bachelor's degree or higher, are more likely to earn above the $50,000 threshold. Conversely, a larger proportion of individuals with high school graduation or lower educational levels tend to earn less than $50,000.

We believe that this pattern underscores the importance of education as a factor in socioeconomic status. Notably, the proportion of individuals earning more than $50,000 increases markedly among those with advanced degrees, such as Master's and Doctorate holders. This suggests that higher education not only correlates with higher income levels but could be a critical factor in securing financial advancement.

- What is the average working hours per week for different income levels?

Description: df [2 × 2]

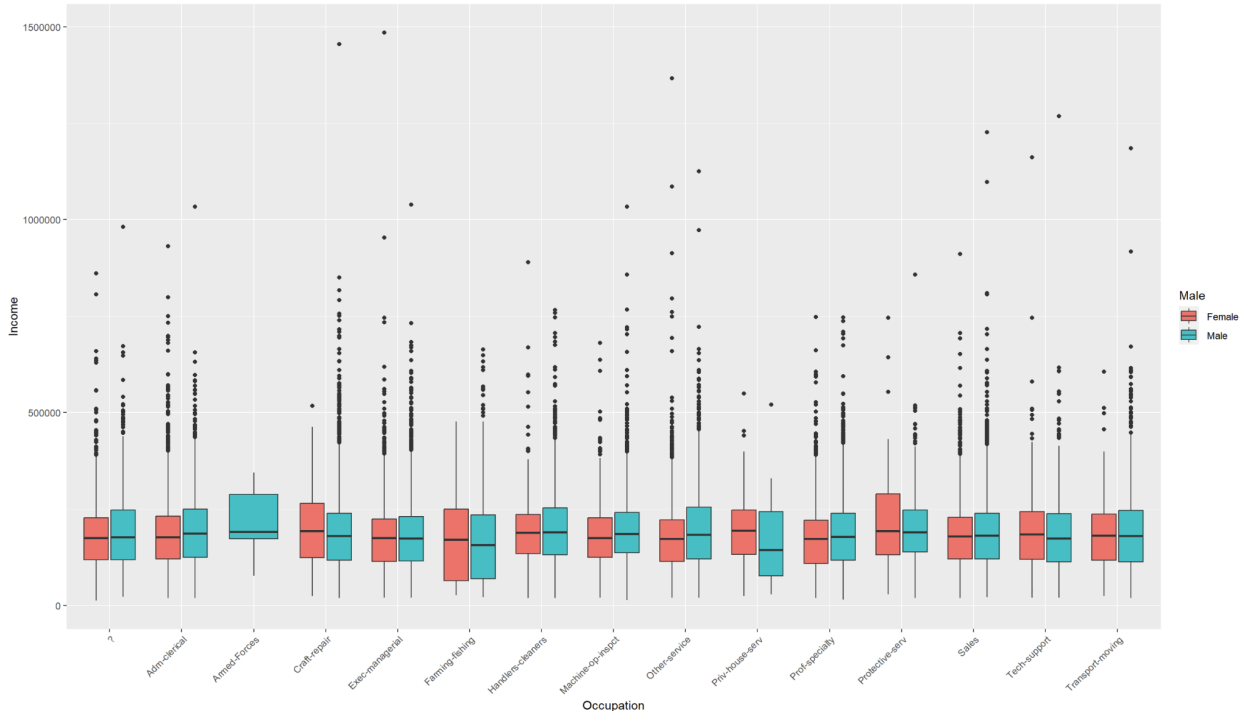
X..50K <chr>	X40 <dbl>
<=50K	38.84016
>50K	45.47303

2 rows

In the examination of average working hours per week, categorized by income levels, our analysis reveals a discernible disparity. We observe that individuals earning more than $50,000 annually work an average of 45.47 hours per week, while those earning less than or equal to $50,000 work slightly fewer hours, averaging 38.84 hours per week.

We believe that these findings indicate a potential correlation between longer working hours and higher income. It suggests that, on average, individuals in the higher income bracket may be engaged in jobs that either demand or reward additional hours of work. This could be reflective of certain occupations that are structured with longer hours for higher compensation, or it could indicate a propensity for individuals in higher-paying roles to invest more time into their work.

- Is there a gender wage gap visible in the dataset across different occupations?



Our investigation into potential gender-based income disparities across various occupations yields a telling visualization through a boxplot. In our analysis, we have compared the income distributions between male and female workers across a range of occupations.

The boxplot indicates some occupations where income disparities are more pronounced, as well as those where incomes are more comparable. Notably, in several occupations, there is a substantial overlap in the income ranges between genders, yet in others, the interquartile ranges (the box portions of the boxplot) and the medians (the lines within the boxes) suggest a gap.