Mahavir Education Trust's
SHAH & ANCHOR KUTCHHI ENGINEERING COLLEGE
Chembur, Mumbai - 400 088
UG Program in Artificial Intelligence and Data Science

# Experiment No: 7

**Aim:** Visualization in R using Libraries.

## Theory:

Data visualization is a crucial aspect of data analysis, as it allows for the representation of complex data in a visually appealing and easily understandable manner. R, being a powerful statistical computing language, offers numerous packages and functions for creating high-quality visualizations. Here are some key theories and concepts related to data visualization in R:

- Aesthetics Mapping: Aesthetic mapping involves mapping variables in your dataset to visual properties such as color, size, shape, and position within the plot. In ggplot2, aesthetic mappings are defined within the aes() function.

- Geometric Objects (Geoms): Geometric objects, or geoms, represent the actual visual elements in a plot, such as points, lines, bars, or polygons. Each geom in ggplot2 corresponds to a different type of plot (e.g., geom_point() for scatter plots, geom_bar() for bar plots).

- Statistical Transformations (Stats): Statistical transformations, or stats, allow you to compute summary statistics or transformations of your data before plotting. For example, you can use stat_smooth() to add a smoothed line to a scatter plot.

- Faceting: Faceting involves splitting your data into subsets based on one or more categorical variables and creating separate plots for each subset. In ggplot2, you can use the facet_wrap() or facet_grid() functions to create faceted plots.

- Customization and Themes: R provides extensive options for customizing the appearance of plots, including modifying axis labels, titles, colors, fonts, and more. ggplot2 allows for further customization using themes, which provide pre-defined sets of appearance settings.

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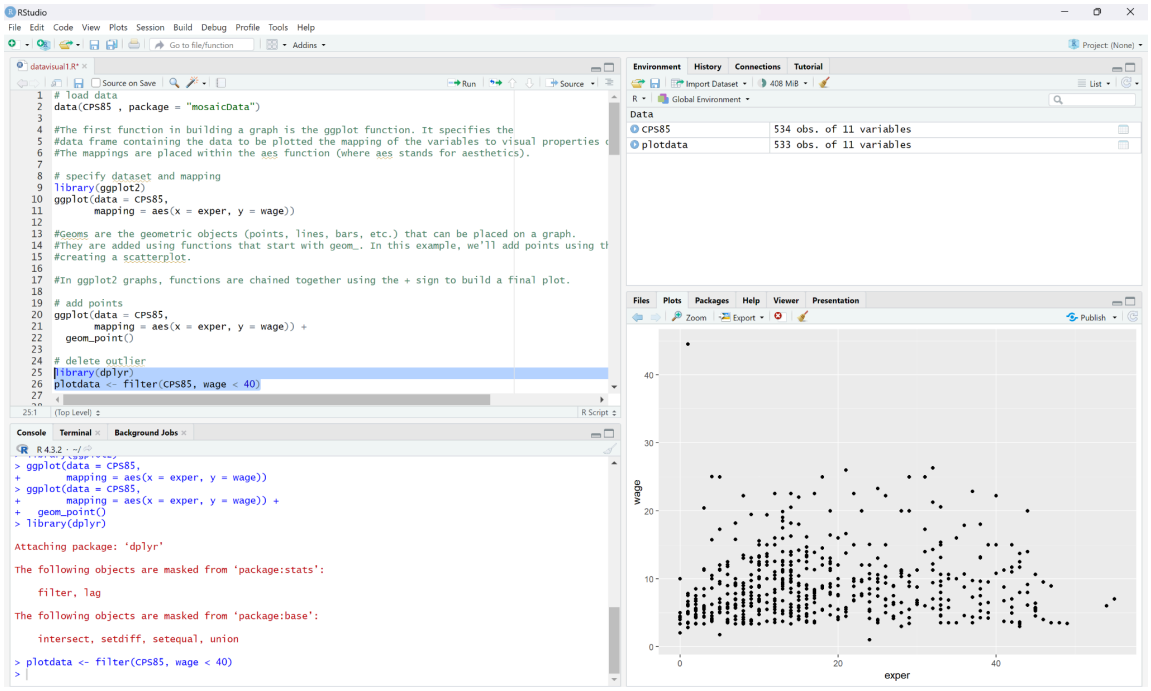
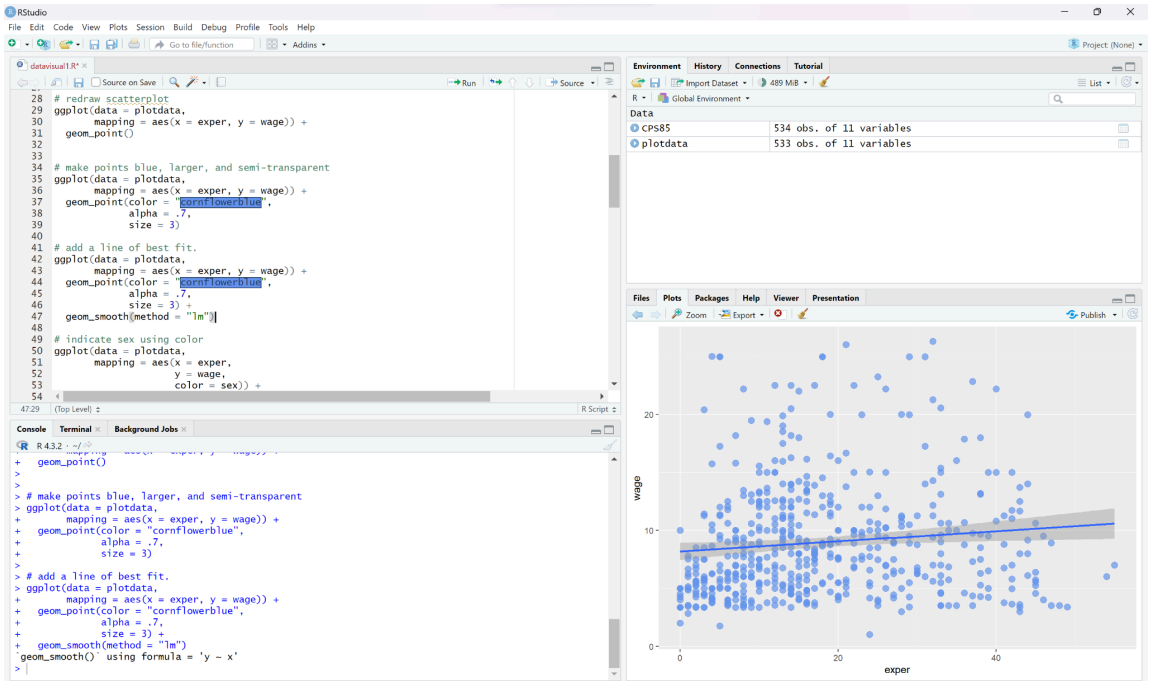
# Code:



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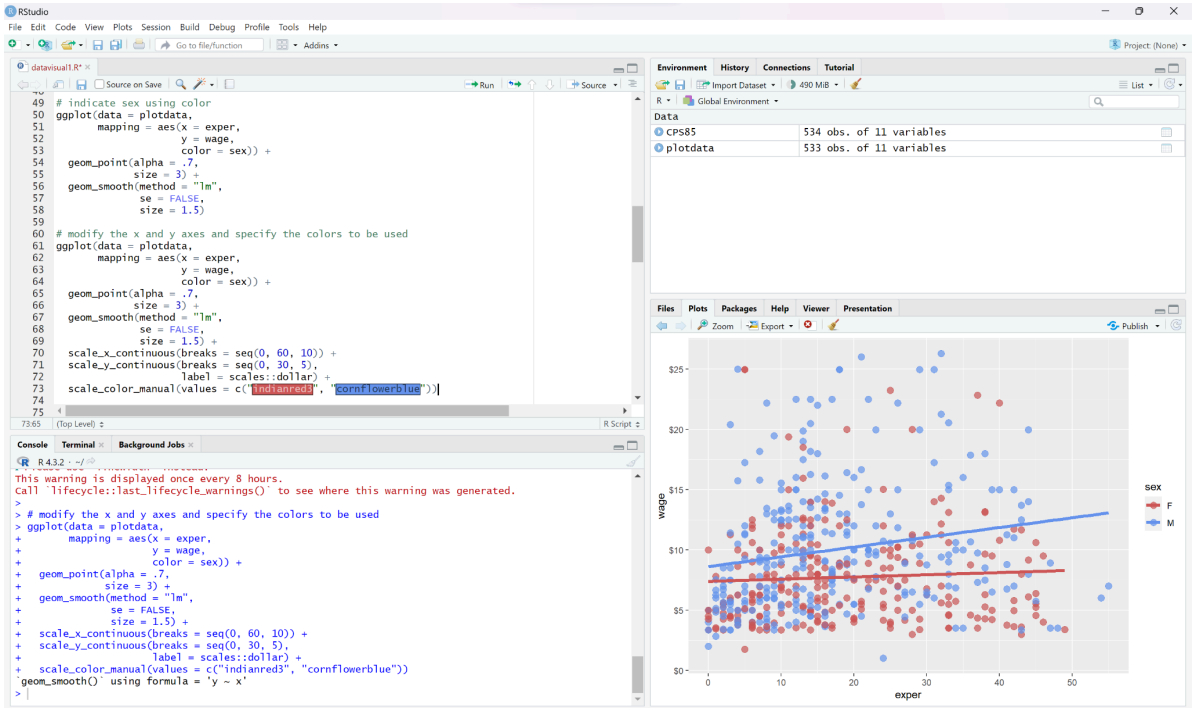


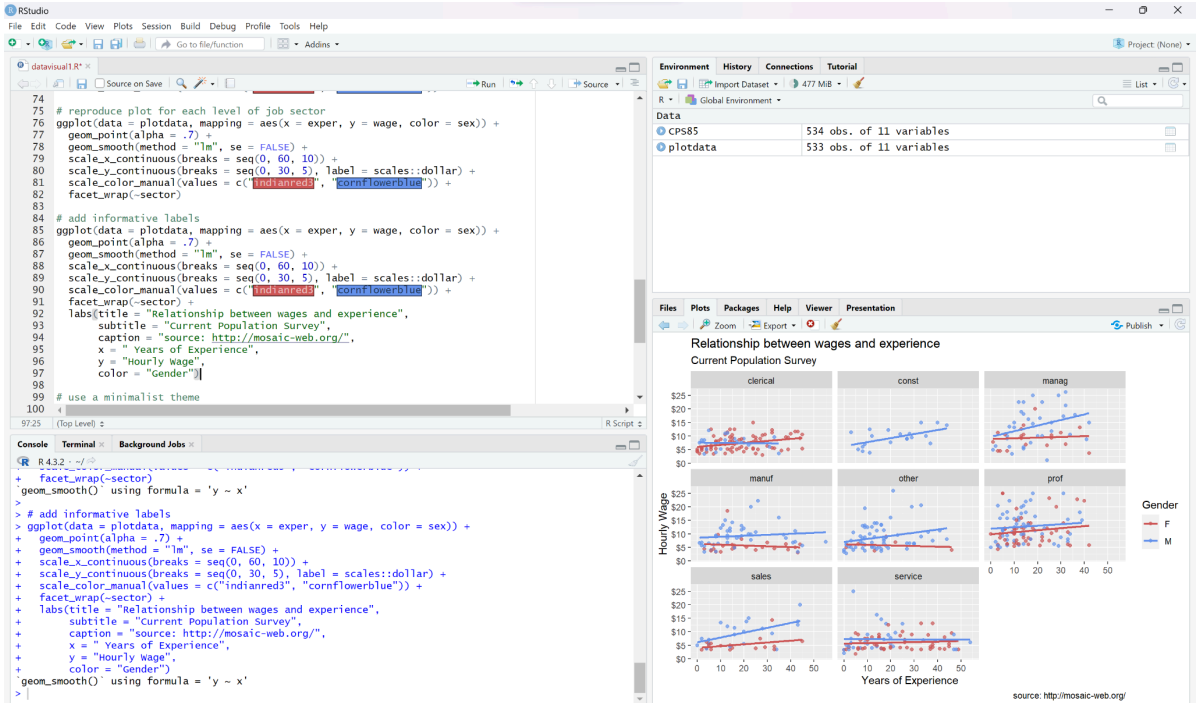

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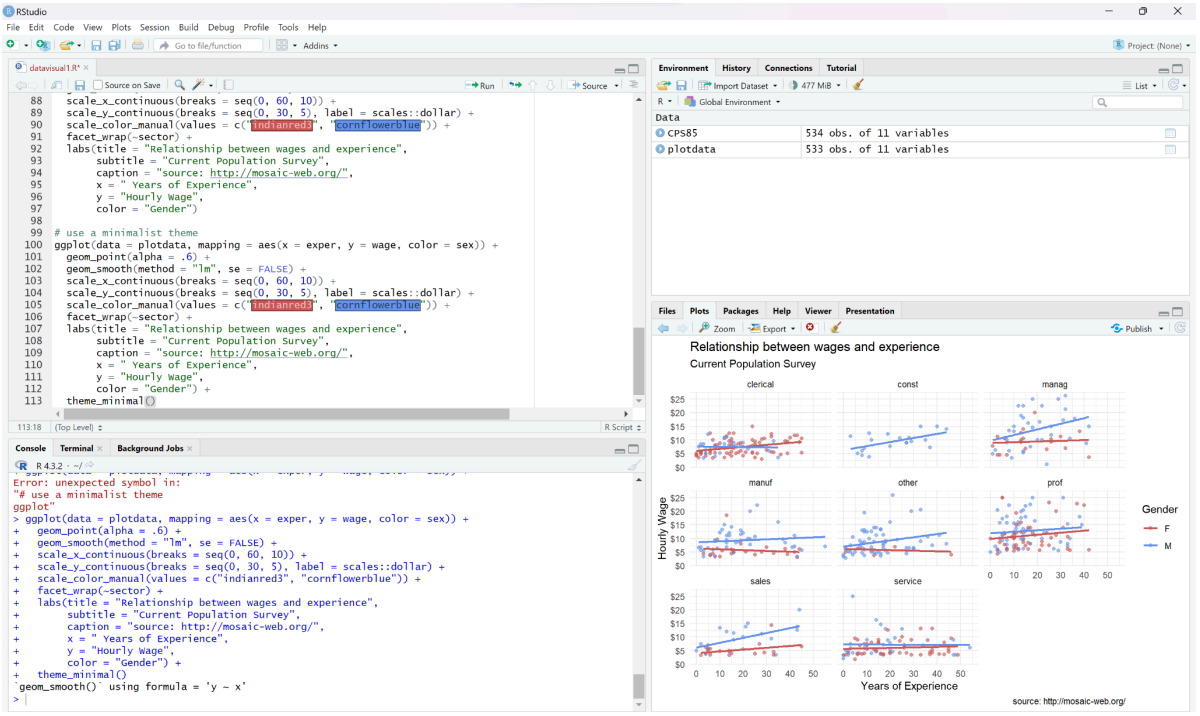


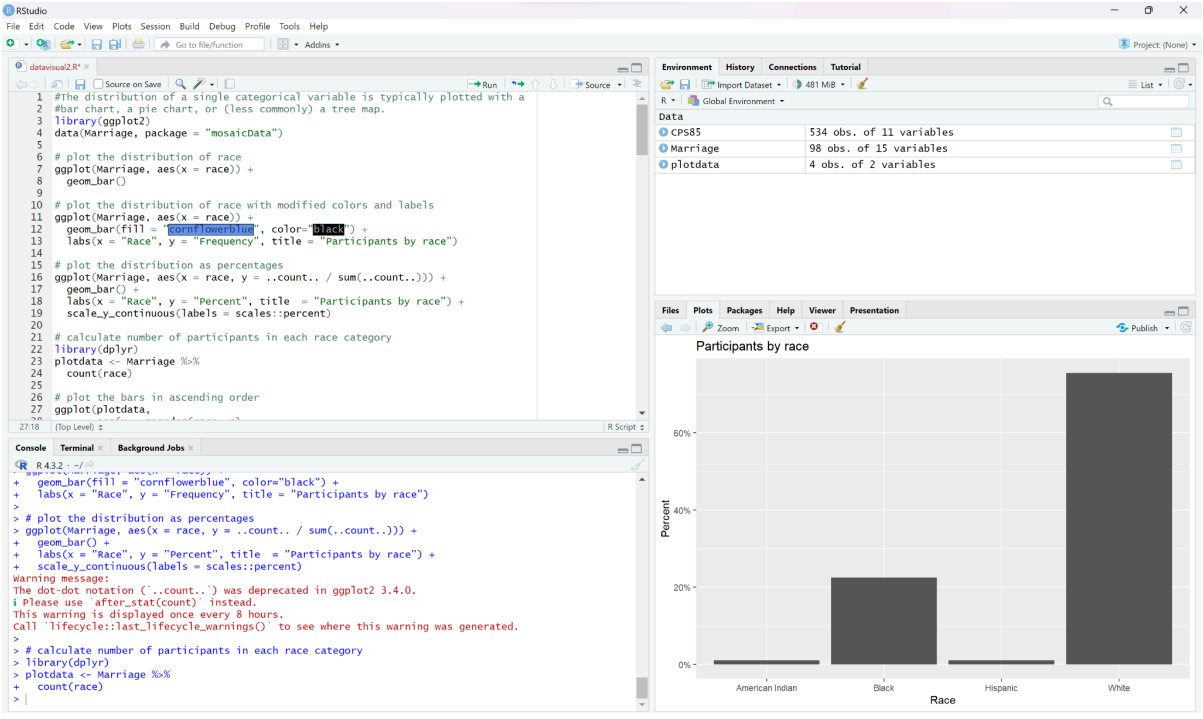

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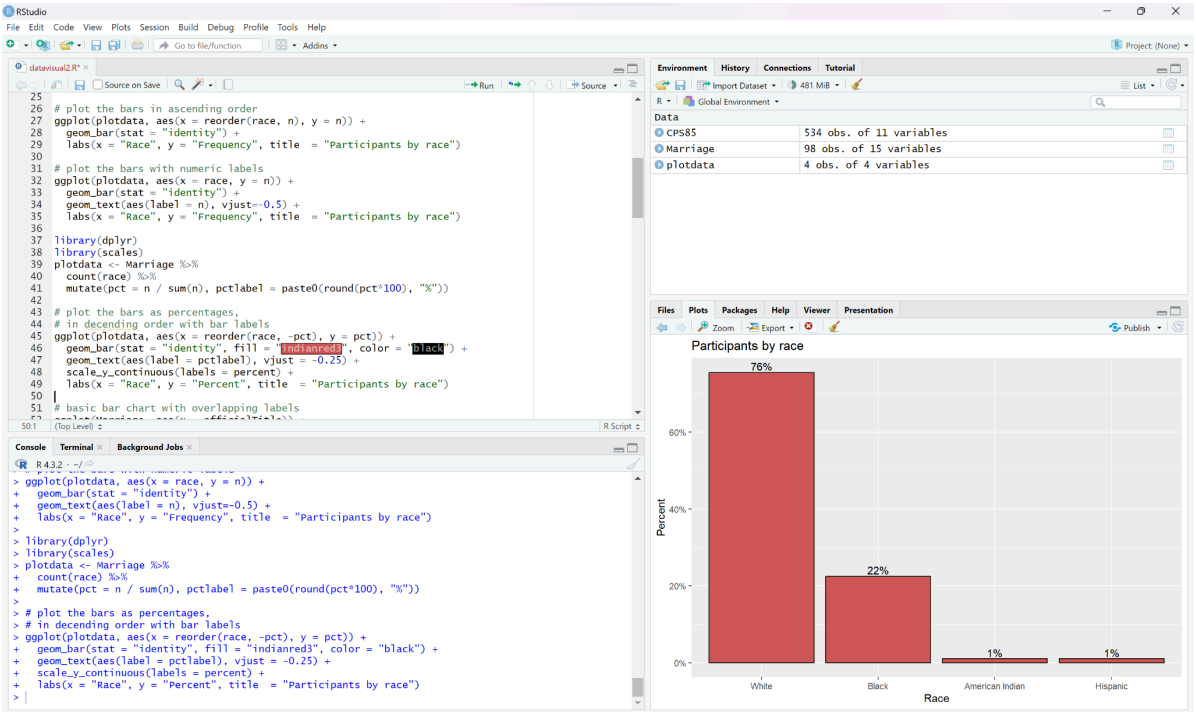


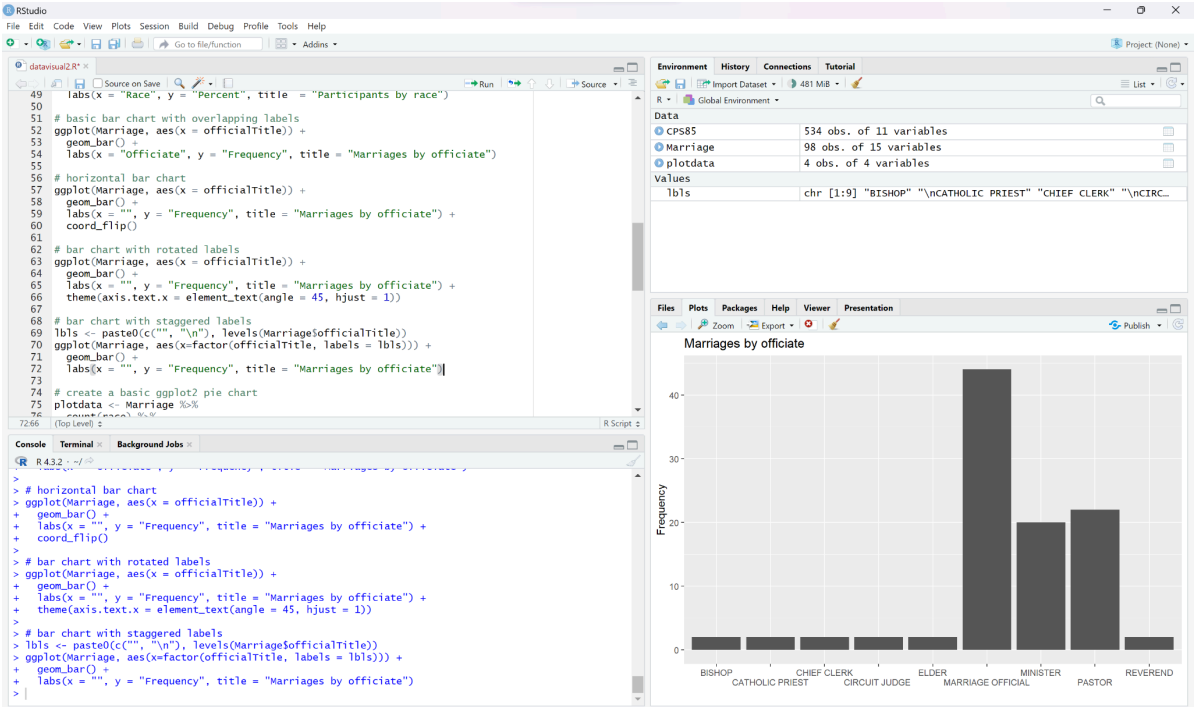

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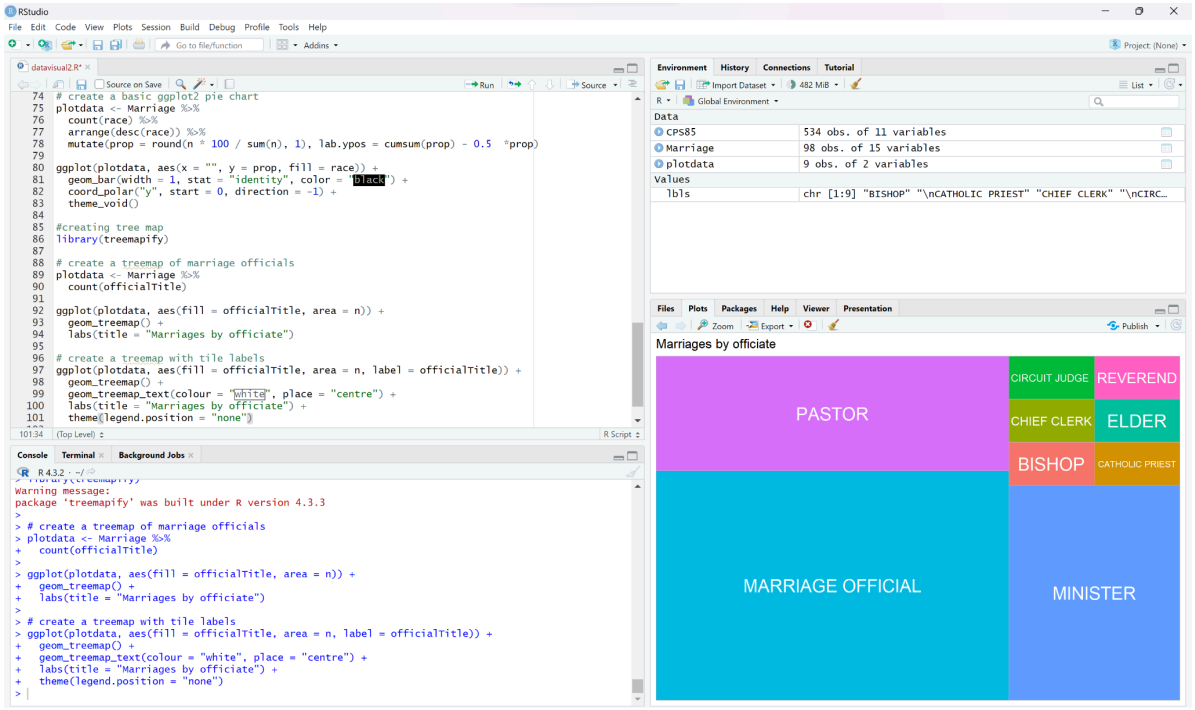


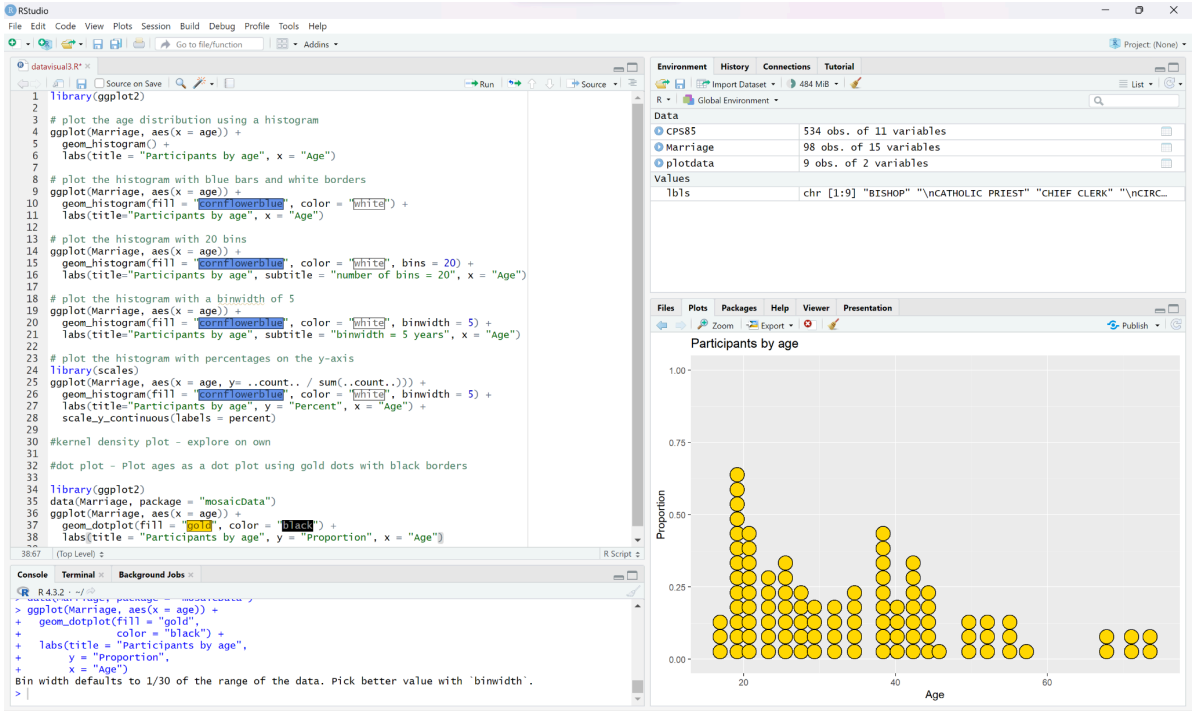

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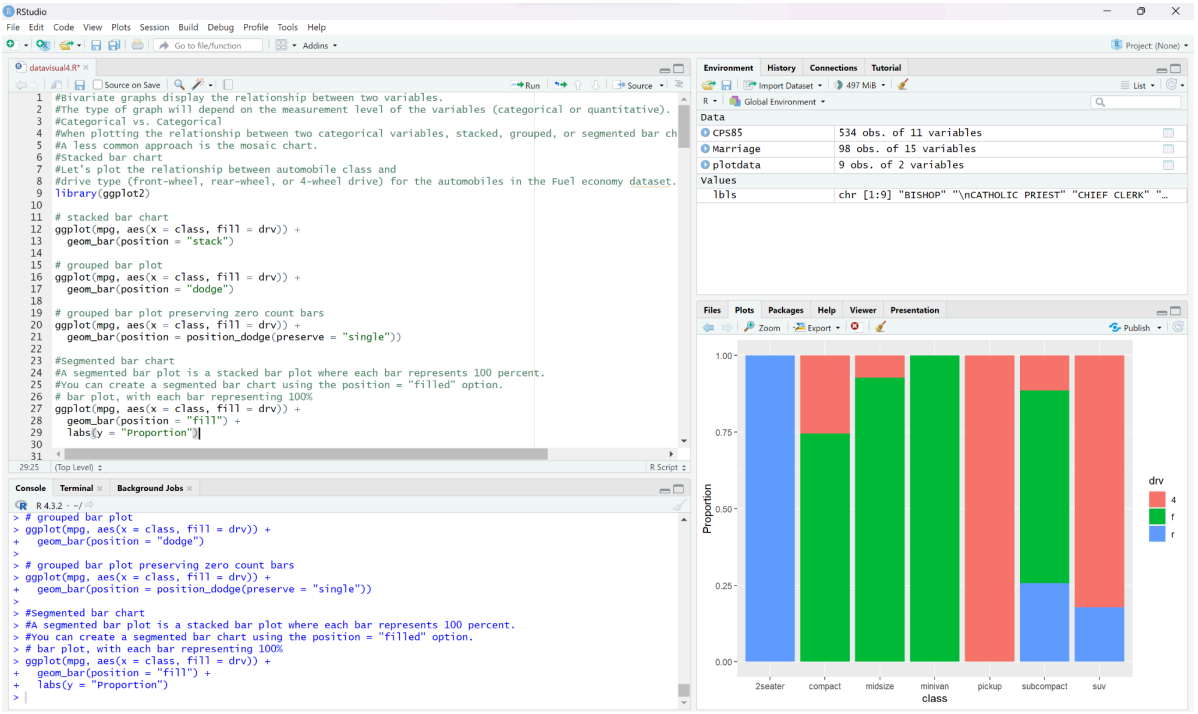


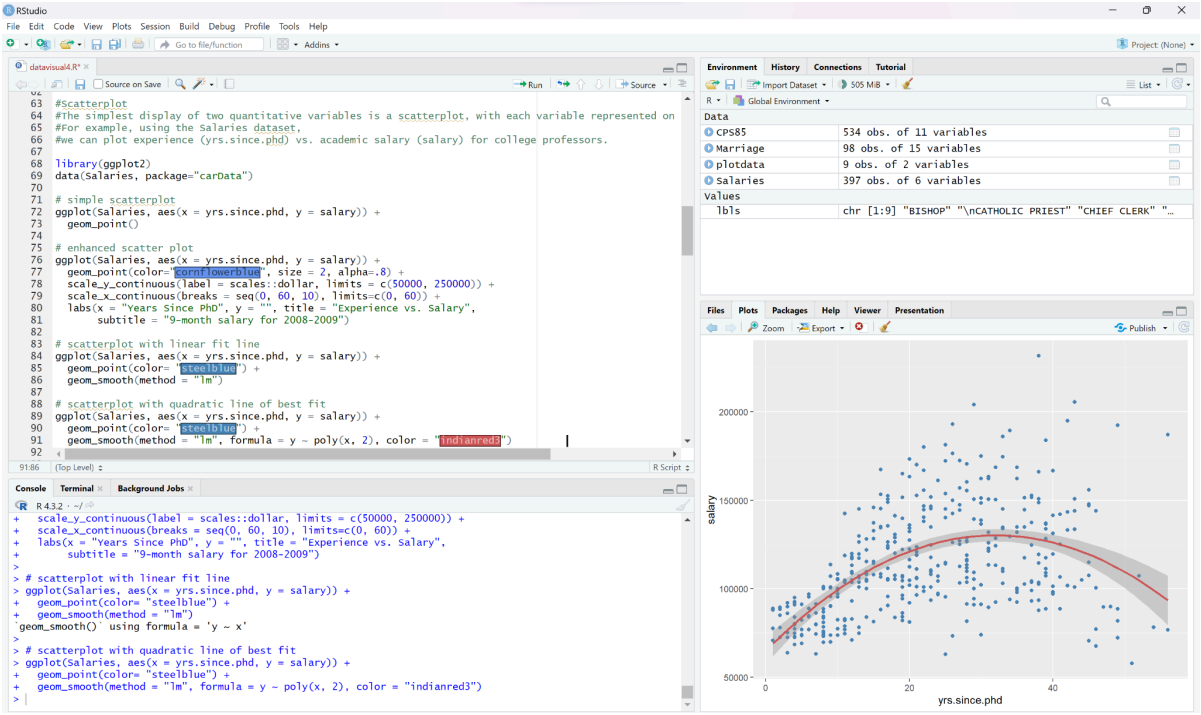

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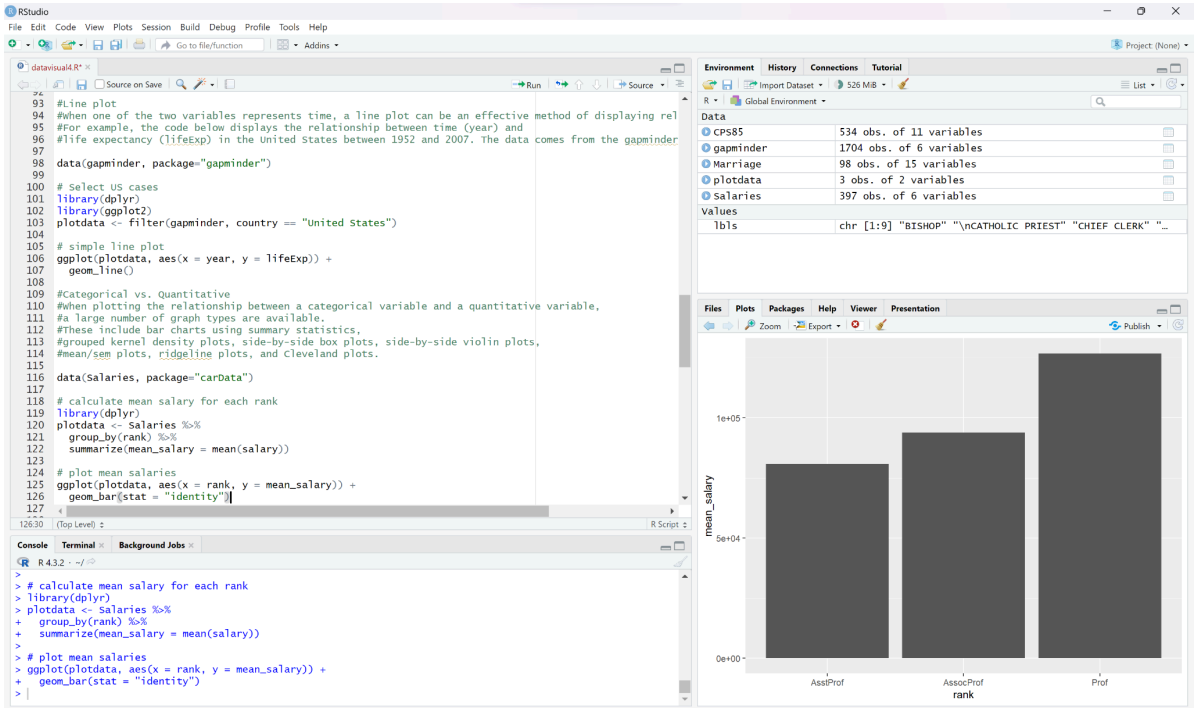


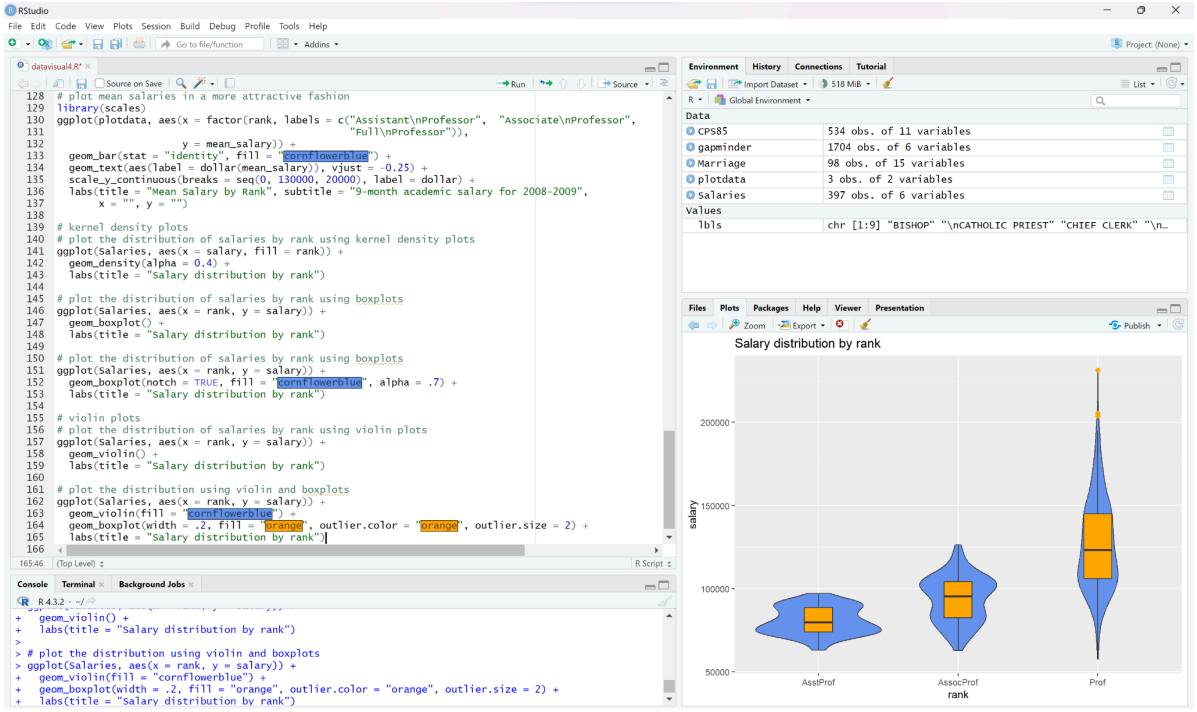

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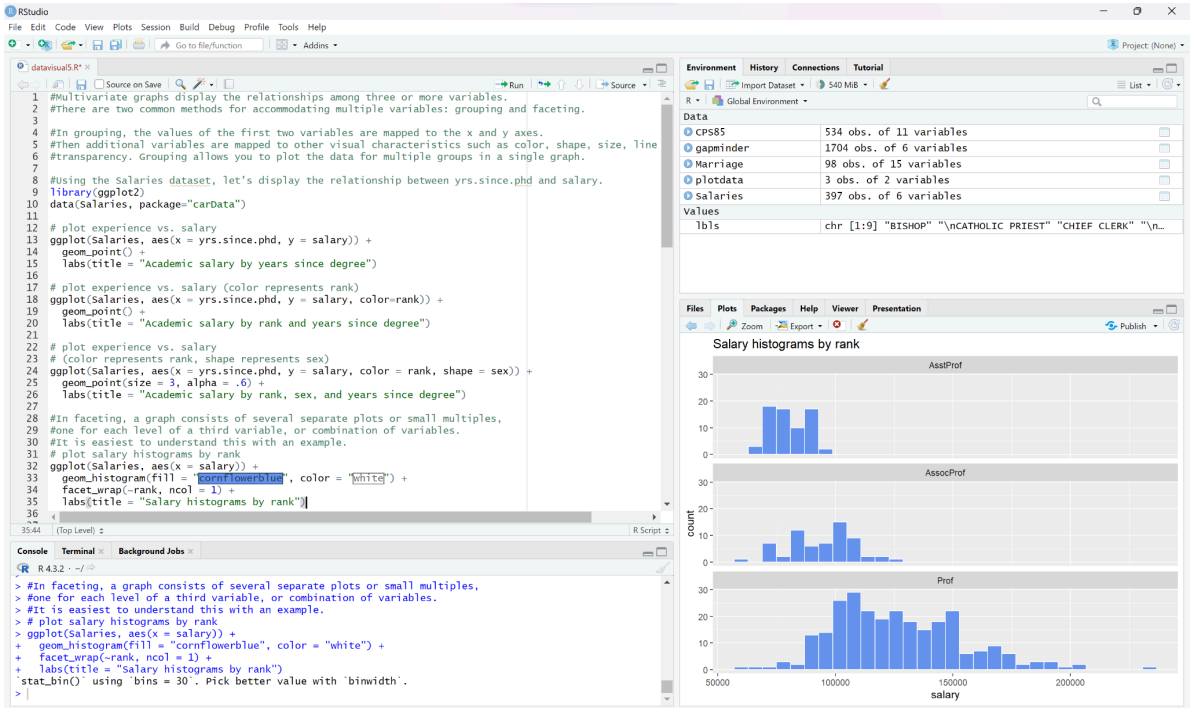


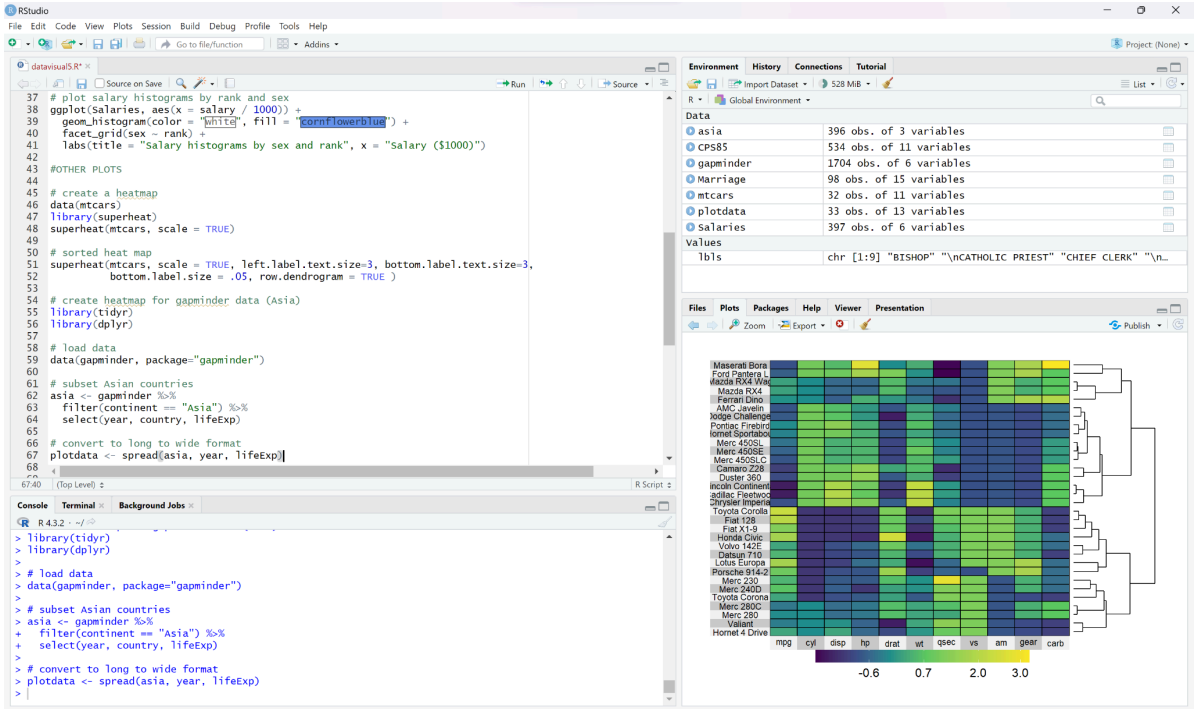

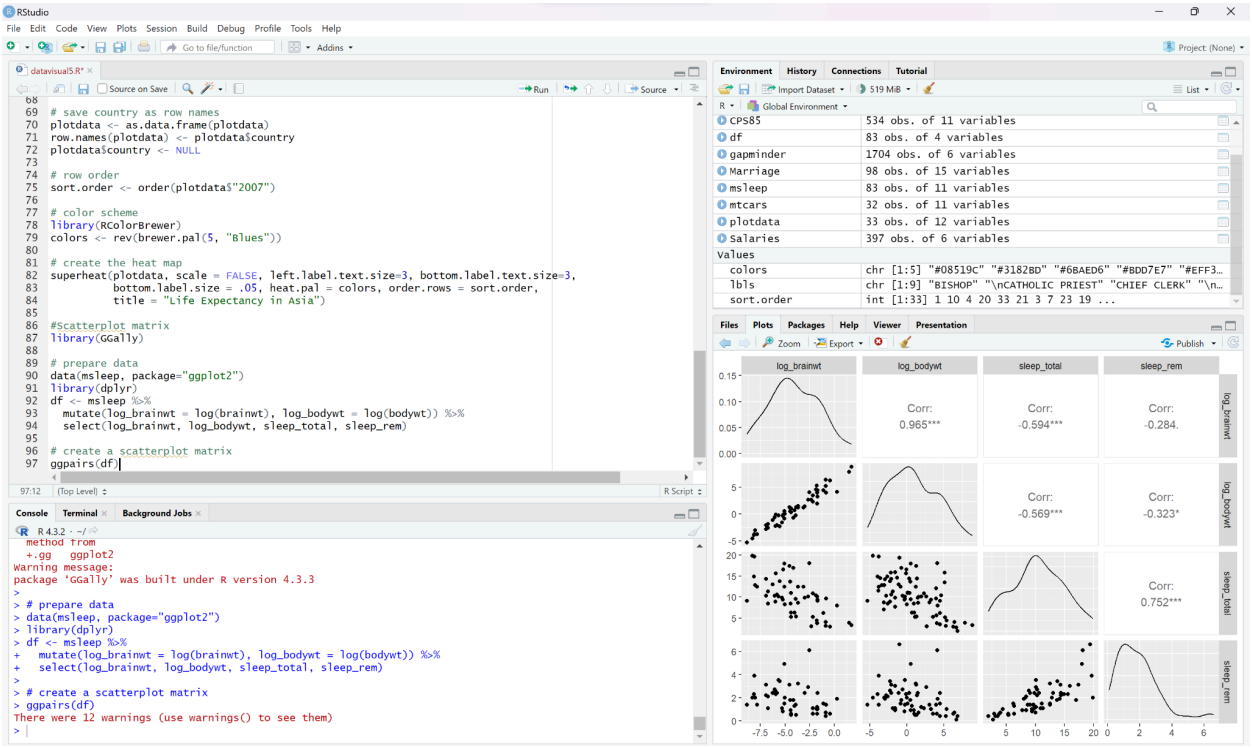


**Conclusion:** Hence we successfully implemented text analytics and Sentiment analysis in python.