**Storytelling for Red Wine Quality Analysis**

**Introduction:**

Hello everyone! Today, we are excited to present our comprehensive analysis of red wine quality using R programming. Our team,

Team leader: - Sadanand Goud Karre

Compiler: - Sai sri lekha kolasani

Reviewer: - Rohith Srikar Sunkara

Administrator: - Poojitha Medasani, has delved into the intricacies of the dataset and harnessed the power of R to derive meaningful insights. Let's embark on a journey through the world of red wine and explore the factors that contribute to its quality.

Dataset Overview:

Our dataset comprises information on various chemical properties of red wines, including fixed acidity, volatile acidity, citric acid, residual sugar, chlorides, free sulfur dioxide, total sulfur dioxide, density, pH, sulphates, alcohol content, and quality. With 1599 observations and 12 variables, we have a rich and diverse dataset to work with.

Initial Exploration:

We kick-started our analysis by loading the dataset and performing an initial exploration. Using base R functions, we created a histogram and a boxplot to visualize the distribution of wine quality. The light blue hues in the plots provide a visual representation of the wine quality frequencies.

Insight: The majority of wines in our dataset fall within the range of 5 to 7 on the quality scale.

Scatter Plots:

Moving on, we delved deeper into the relationship between alcohol content and wine quality. We created scatter plots with colorful distinctions for each quality level. This allowed us to visually inspect if there are any discernible patterns or correlations.

Insight: It seems that higher alcohol content might be associated with higher wine quality, as indicated by the scatter plot and the legend.

Enhancing Visualizations with ggplot2:

To enhance our visualizations, we incorporated the ggplot2 library. The ggplot2 package allowed us to create more aesthetically pleasing and informative plots, including boxplots, scatter plots, and bar plots.

Insight: The ggplot2 visualizations reiterate our initial observations, providing a clearer and more engaging representation of the data.

Comparative Analysis:

To further enrich our analysis, we employed both base R and ggplot2 to compare boxplots, scatter plots, and bar plots side by side. This approach helped us appreciate the strengths of each plotting method and choose the most suitable representation for our specific needs.

Insight: The comparative analysis showcased the versatility of different plotting techniques in conveying the same information.

Lattice Package Integration:

In the final segment of our analysis, we explored the lattice package to create boxplots, scatter plots, and bar plots. This alternative package provided yet another perspective on our dataset, offering a different visual experience.

Insight: The lattice package offers a unique set of visualizations, contributing to a holistic understanding of the data.

Conclusion:

In conclusion, our team has successfully navigated the world of red wine quality using R programming. We've uncovered insights into the distribution of wine quality, explored the relationship between alcohol content and quality, and showcased the power of different plotting libraries. The diverse visualizations presented today pave the way for further exploration and refinement of our analyses.

Thank you for joining us on this journey through the vineyards of data analysis!

Team Kanya Rashi:

Team Leader: Sadanand Goud Karre

Compiler: Sai Sri Lekha Kolasani

Reviewer: Rohith Srikar Sunkara

Administrator: Poojitha Medasani

ROLES AND RESPONSIBILITIES

Team Presentation Script for Zoom Recording:

Opening:

Hello, everyone! We're thrilled to share our journey through the analysis of red wine quality. Each team member played a crucial role, and we can't wait to present our findings. Let's dive into the storytelling of our team members and their contributions.

1. Team Leader: Sadanand Goud Karre

Sadanand:

"Hello, everyone! As the team leader, my role involved strategic planning and goal-setting for our project. I ensured that we met deadlines, made effective decisions, and resolved any issues that arose. Coordinating and communicating with the team was key to our success. To ensure a comprehensive presentation, I made sure each member contributed three graphs, totaling 12. I facilitated a collaborative environment to enhance team cohesion."

2. Compiler: Sai Sri Lekha Kolasani

Sai Sri Lekha:

"Hi, everyone! I took on the role of the compiler, focusing on data cleaning and quality. Before any data cleaning for the final submission, I approved and organized the dataset. My responsibility extended to collecting and structuring the data set for the team. I ensured that the team understood how to create slides for the presentation, contributing to the final submission. The team's recorded presentation was a collaborative effort, with files neatly organized using the Files Tab for easy access."

3. Reviewer: Rohith Srikar Sunkara

Rohith:

"Hello, team! I was the reviewer, overseeing the accuracy of our data set and ensuring it met the specified standards. I meticulously reviewed and edited the data asset, adhering to instructions and regulations. My role also included spellchecking the presentation and providing constructive feedback for improvement. Collaboration and adherence to guidelines were key to our success."

4. Administrator: Poojitha Medasani

Poojitha:

"Hi, everyone! As the administrator, I focused on finalizing the story we wanted to tell based on the data we found. It was important for our team to agree on the narrative. I also took on the Zoom admin role, ensuring smooth transitions during the presentation. My responsibility extended to submitting the final project by the deadline of December 17th. The submission included the recorded presentation, RMD, and HTML files. We maintained accountability by providing feedback through a team performance form."

Closing:

"In conclusion, our diverse roles and collaborative efforts led to a comprehensive analysis of red wine quality. We hope you enjoy our presentation, and thank you for being part of our journey!"