**Pictures of Red Wine Analysis: how to do it step by step?**

**Source**: [UCI Machine Learning Repository – Wine Quality Dataset](https://archive.ics.uci.edu/ml/datasets/wine+quality)

A glass of wine on a ledge

AI-generated content may be incorrect.

1. **Load the CSV File**

A screenshot of a computer

AI-generated content may be incorrect.

1. **Descriptive Statistics,** **check missing, check data types**

A screenshot of a graph

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

1. **Create binary column, round to 4 decimal & verify changes**

A screenshot of a computer

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1. **Create Pie Chart** A screenshot of a computer code

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A red and purple pie chart

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1. **Analyze distribution of quality - Create Countplot**

A bar chart with numbers and text

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1. **Create Heatmap**

A screenshot of a computer screen

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1. **Create Histogramplot**

A screenshot of a computer screen

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1. **Create Boxplot – Alcohol Content & Volatile Acidity**

A screenshot of a computer screen

AI-generated content may be incorrect.**A screenshot of a graph

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1. **Create** **Scatter Plot: Sulphates vs. Alcohol**

A screen shot of a computer screen

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10) **Create** **Histogramplot of Alcohol Levels**

**A graph of alcohol and alcohol

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11) **Discovered duplicates rows & Update final Cleaned Dataset**

**A screenshot of a computer program

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A screenshot of a computer program

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A screenshot of a computer code

AI-generated content may be incorrect.

A red and purple pie chart

AI-generated content may be incorrect.

12. **Confusion Matrix Heatmap**A screenshot of a computer

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13) **Create** **ROC Curve stands for Receiver Operating Characteristic**

**A screen shot of a computer

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**14) Create Barplot**

**A screenshot of a computer code

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**A graph of a number of objects

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15) **Create Boxplot** **- Distribution of Alcohol Content & Volatile Acidity** A screenshot of a computer screen

AI-generated content may be incorrect.A screenshot of a computer screen

AI-generated content may be incorrect.

16) **Business Recommendations** A close-up of a chart

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“Special thanks to my trainer Mr. Bishmer and my classmates for the learning journey.  
Thank you very much for your time—I welcome any feedback or questions.”

(Ending)