**Iris Dataset Analysis Report**

1. **Introduction**

| **Project Goal** | *Explore relationships between the Iris flower dataset features (sepal length, sepal width, petal length, petal width) and use Excel for data analysis***.** |  |
| --- | --- | --- |

1. **Dataset Overview**

| **Dataset** | **Iris Flower Dataset** |
| --- | --- |
| **Source** | *UCI Machine Learning Repository* |
| **Features** | *Sepal Length, Sepal Width, Petal Length, Petal Width* |
| **Data Cleaning** | *Checked for missing/incorrect values and handled them appropriately. Dataset was clean and ready for analysis.* |

1. **Statistical Analysis**

**3.1. Descriptive Statistics**

| **Feature** | **Mean** | **Median** | **Mode** | **Range** | **Variance** | **Standard Deviation** |
| --- | --- | --- | --- | --- | --- | --- |
| Sepal Length | 4.86 | 4.9 | #N/A |  | 0.0344 | 0.18547237 |
| Sepal Width | 3.28 | 3.2 | #N/A |  | 0.0536 | 0.231516738 |
| Petal Length | 1.4 | 1.4 | 1.4 |  | 0.004 | 0.21602469 |
| Petal Width | 0.2 | 0.2 | 0.2 |  | 0 | 0 |

**3.2. Visualizations**

| **Visualization Type** | **Description** |
| --- | --- |
| **Histograms** | *Histograms were created for each feature to show their distribution*    . |
| **Line Chart** |  |
|  |  |

**3.3. Correlation Analysis**

| **Feature Pair** | **Correlation Coefficient** |
| --- | --- |
| Sepal Length vs. Sepal Width | 0.680019294 |
| Sepal Length vs. Petal Length | -0.170498585 |
| Sepal Length vs. Petal Width | #DIV/0! |
| Sepal Width vs. Petal Length | #N/A |
| Sepal Width vs. Petal Width | #DIV/0! |
| Petal Length vs. Petal Width | #DIV/0! |

| **Correlation Matrix** | **Sepal Length** | **Sepal Width** | **Petal Length** | **Petal Width** |
| --- | --- | --- | --- | --- |
| **Sepal Length** |  |  |  |  |
| **Sepal Width** |  |  |  |  |
| **Petal Length** |  |  |  |  |
| **Petal Width** |  |  |  |  |

1. **Findings and Conclusion**

| **Findings** | **Key observations and patterns from the statistical analysis and visualizations.** |
| --- | --- |
| **Conclusion** | *Summary of the relationships between the features and any significant insights drawn.* |

1. **Appendices**

| **Appendix** | **Details** |
| --- | --- |
| Data Cleaning | *Log of any data cleaning steps, such as handling missing values or corrections.* |
| Excel Formulas | *List and explanation of Excel formulas used (e.g., =AVERAGE(), =MEDIAN(), =CORREL()).* |
| Visualizations | *Copies of all visualizations created during the analysis.* |

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