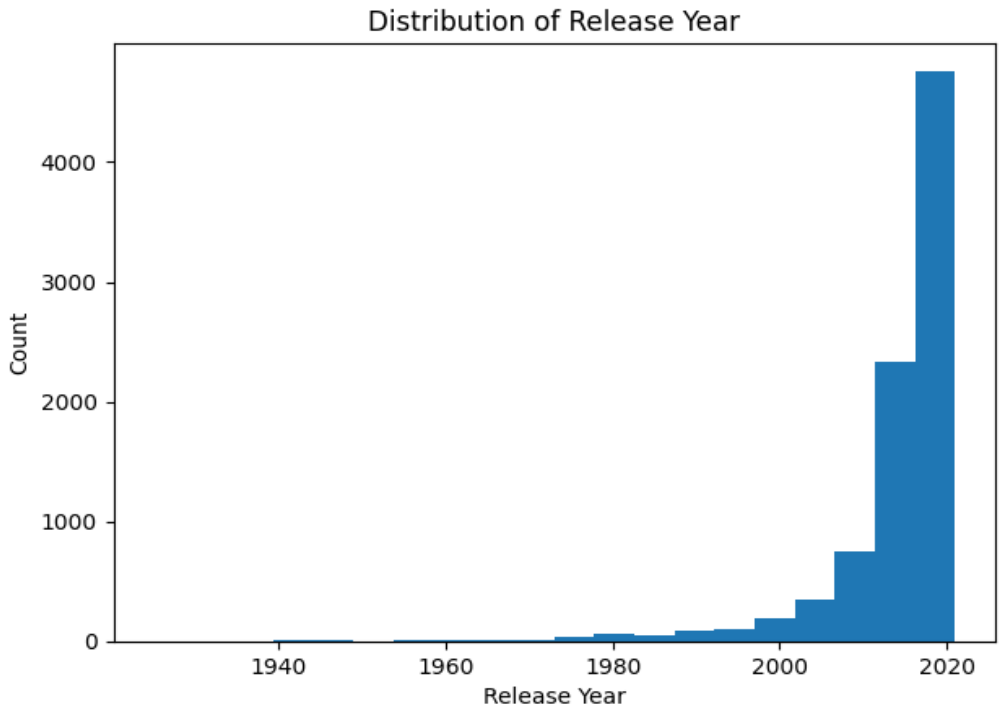
Exploratory Data Analysis (EDA) – Visual Insights Report

TOOLS USED:
Python - Pandas, Matplotlib, Seaborn

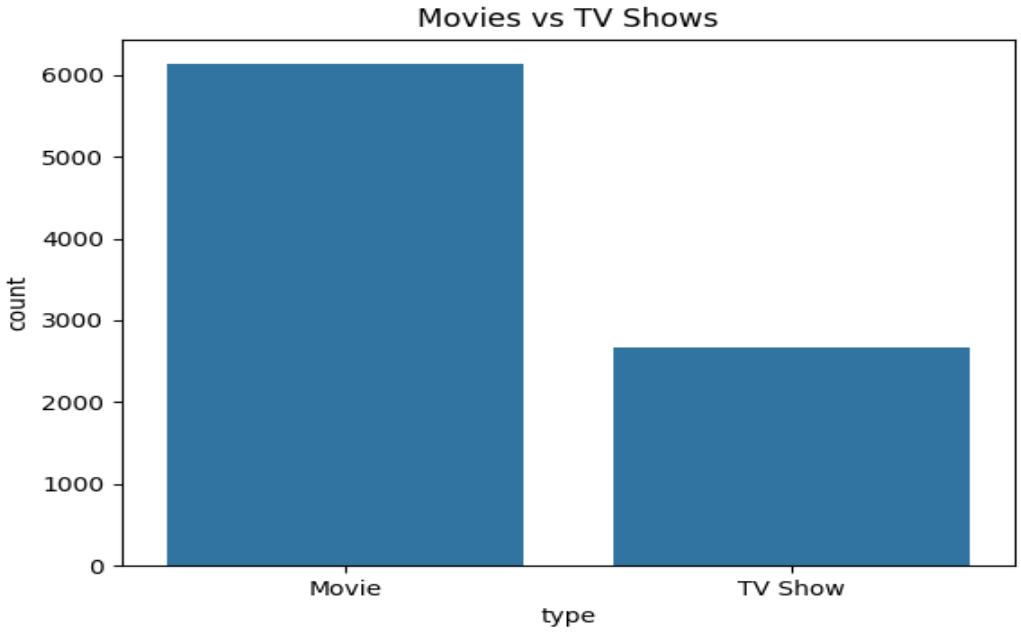
DATASETS:
1. Netflix Movies and TV Shows Dataset
2. Iris Dataset

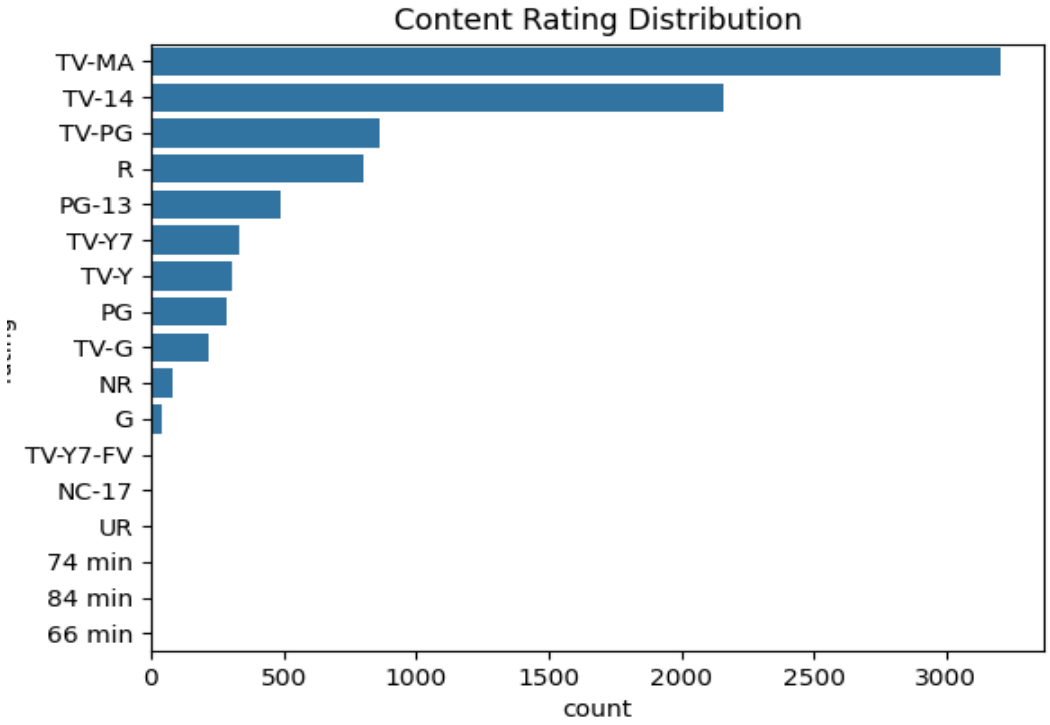
NETFLIX DATASET INSIGHTS

1. Histogram Analysis (Release Year):

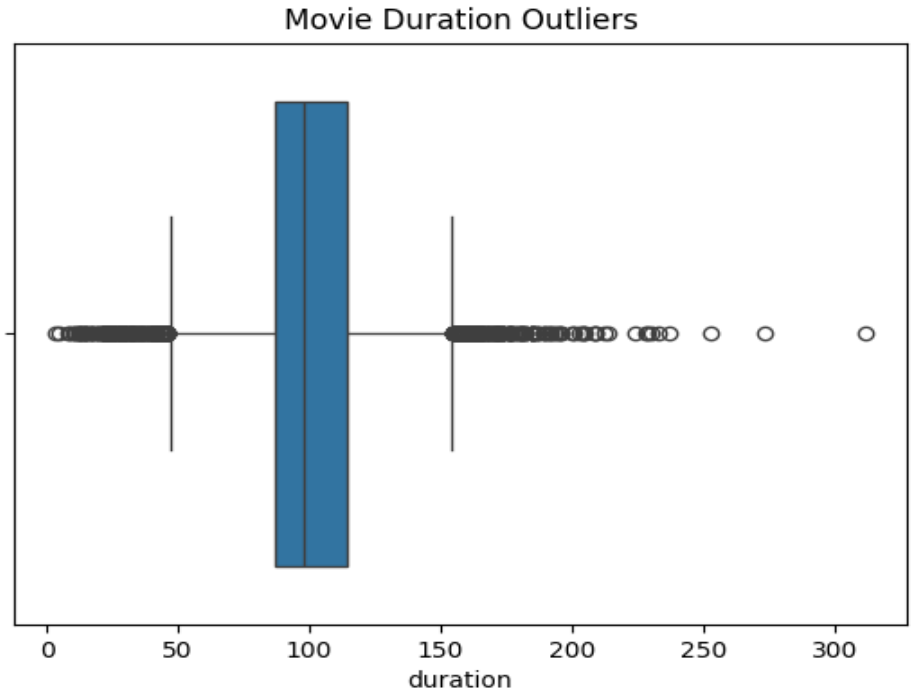


2. Categorical Analysis:

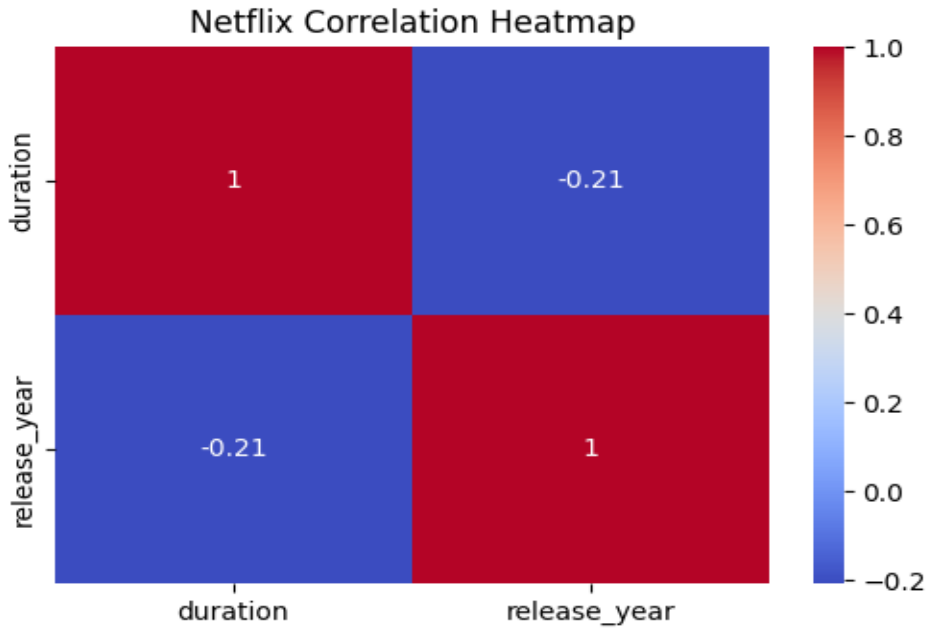

Movies vs TV Shows
6000
5000
4000
3000
2000
1000
0
count
Movie
TV Show
type


Content Rating Distribution
TV-MA
TV-14
TV-PG
R
PG-13
TV-Y7
TV-Y
PG
TV-G
NR
G
TV-Y7-FV
NC-17
UR
74 min
84 min
66 min
0
500
1000
1500
2000
2500
3000
count

3. Outlier Detection:



4. Correlation Analysis:



Insights:

- Weak correlation between duration and release year.
- Netflix dataset is largely categorical.

Important Features for Prediction (Netflix)

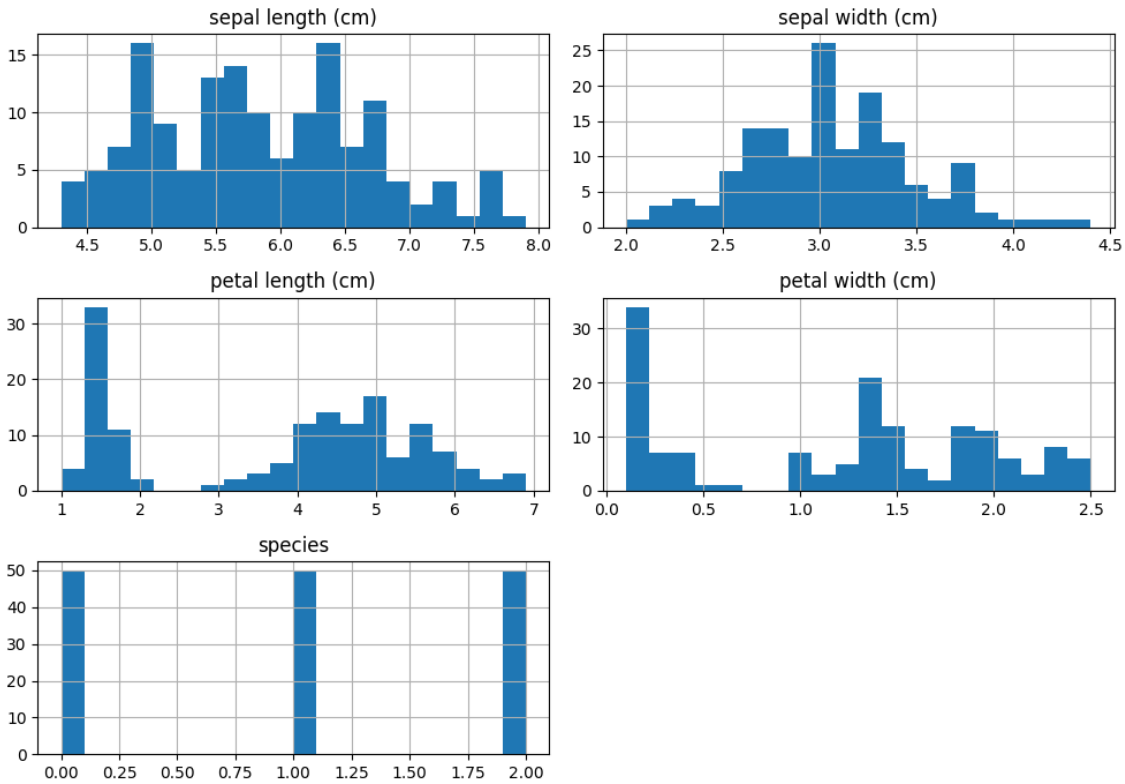
- Type (Movie / TV Show)
- Release Year
- Rating
- Duration
- Country

Netflix Summary

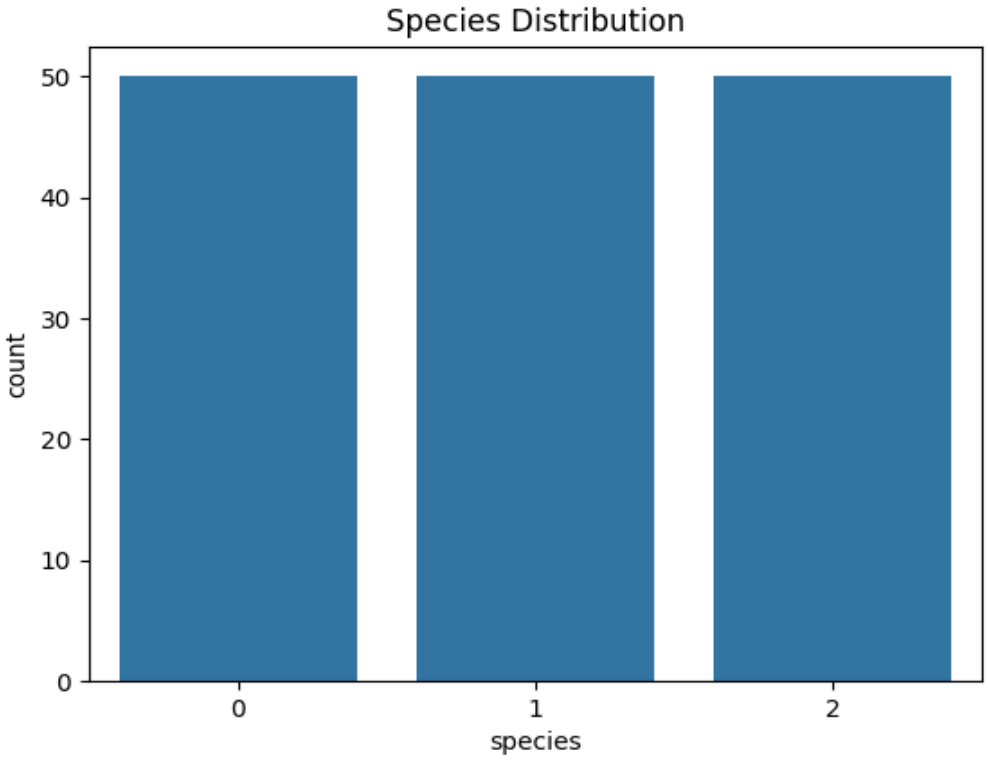
- Dataset is highly categorical.
- Movies dominate the platform.
- Content production surged after 2015.
- Duration contains extreme outliers.
- Ratings indicate mature audience focus.

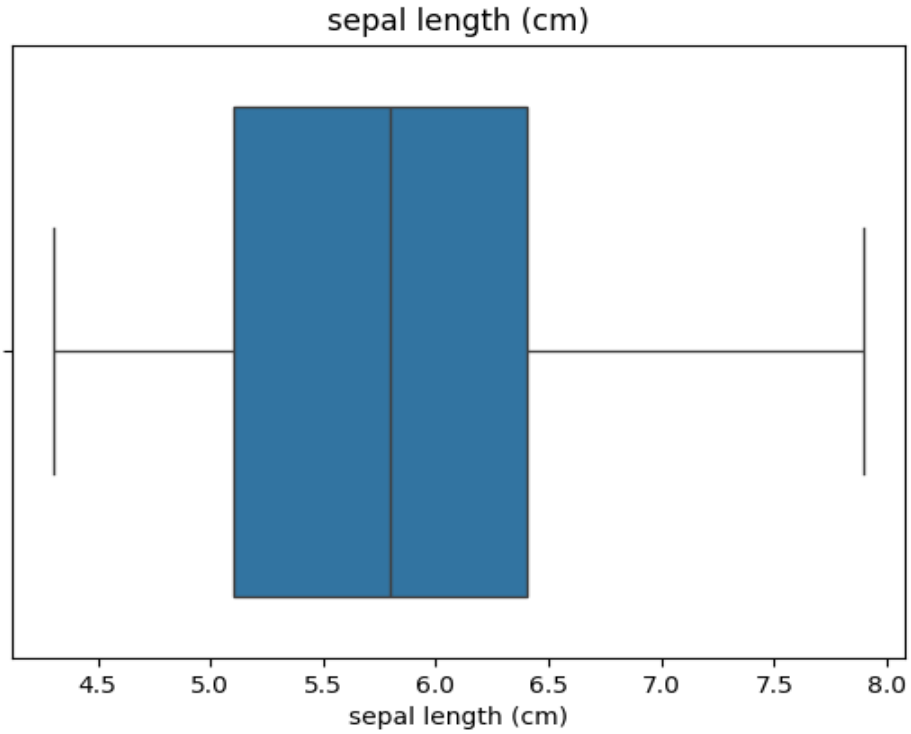
IRIS DATASET INSIGHTS

1. Histogram Analysis:

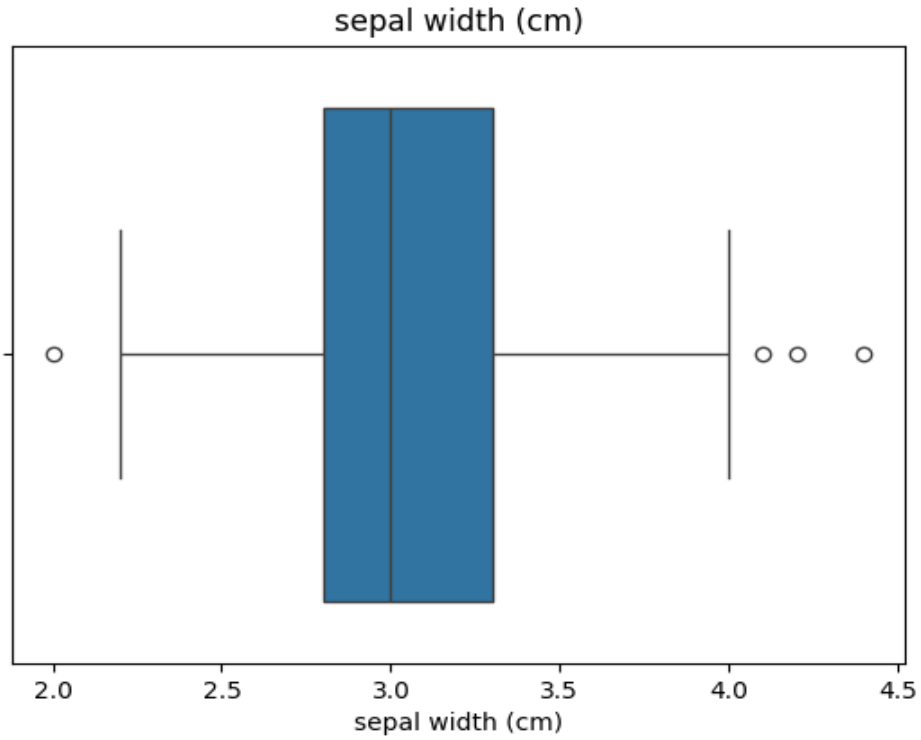


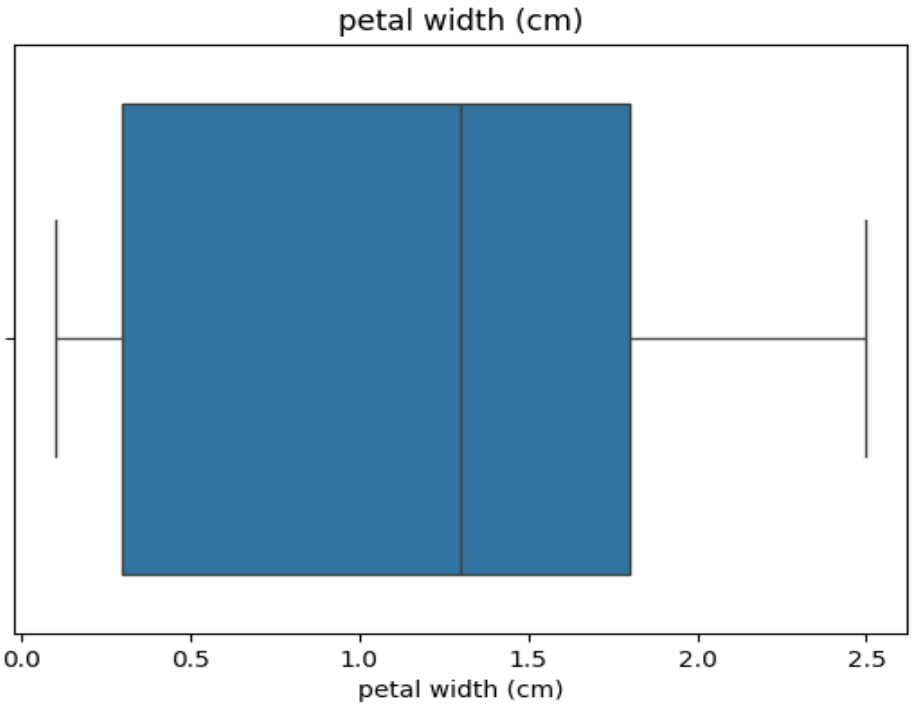
2. Categorical Analysis:

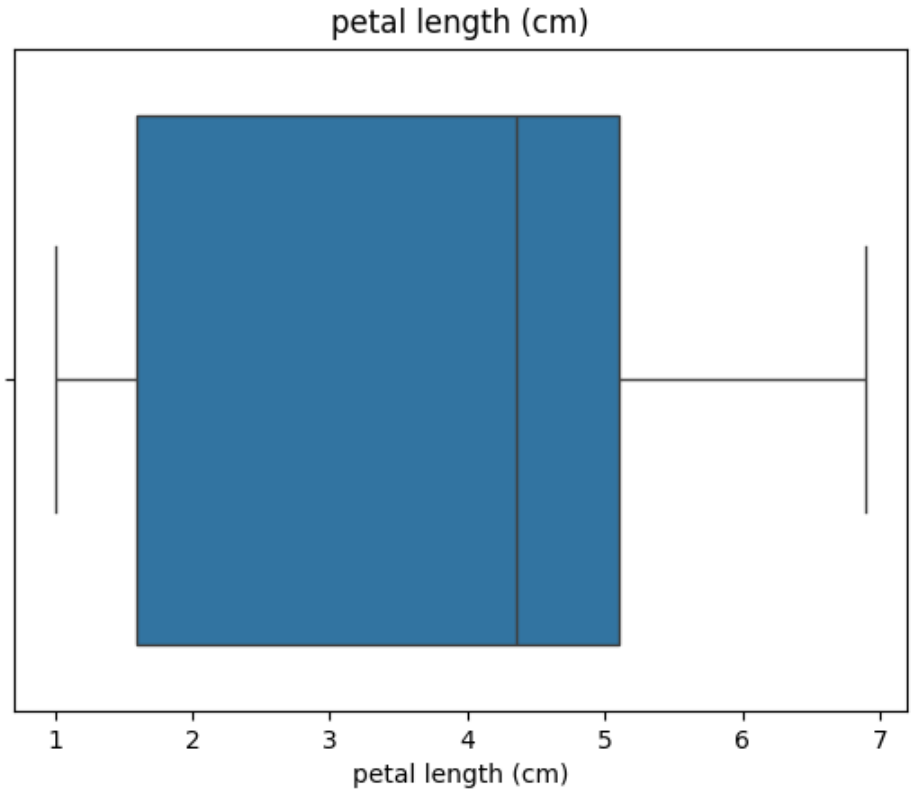




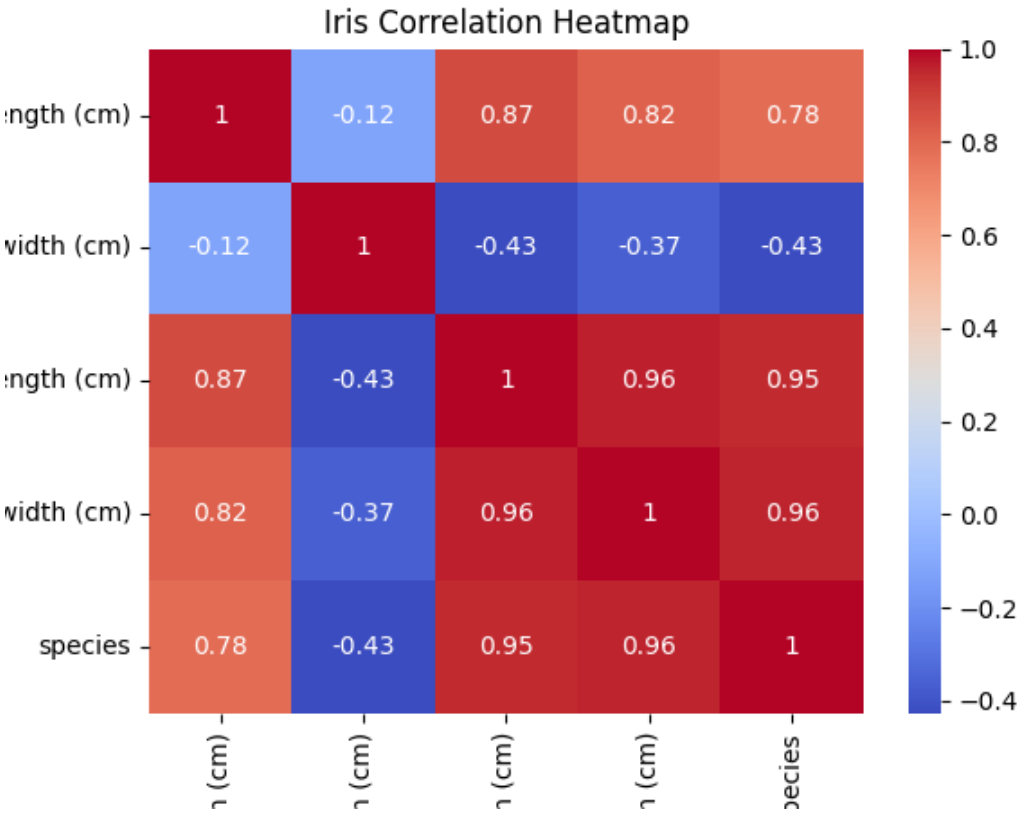
3. Outlier Detection:




petal width (cm)
0.0
0.5
1.0
1.5
2.0
2.5
petal width (cm)


petal length (cm)
1
2
3
4
5
6
7
petal length (cm)

4. Correlation Analysis:



Insights:

- Strong correlation between petal length and petal width.
- Sepal width has weak correlation.
- Petal features are ideal for classification.

Important Features for Prediction (Iris)

- Petal Length
- Petal Width
- Sepal Length

Iris Summary

- Balanced dataset with no class imbalance.
- Strong correlation among petal features.
- Minimal outliers present.
- Highly suitable for classification models.
- Petal measurements dominate prediction power.

CONCLUSION

EDA helped understand data patterns, detect anomalies, and identify important features. Visualization techniques made data interpretation easier and more effective.