

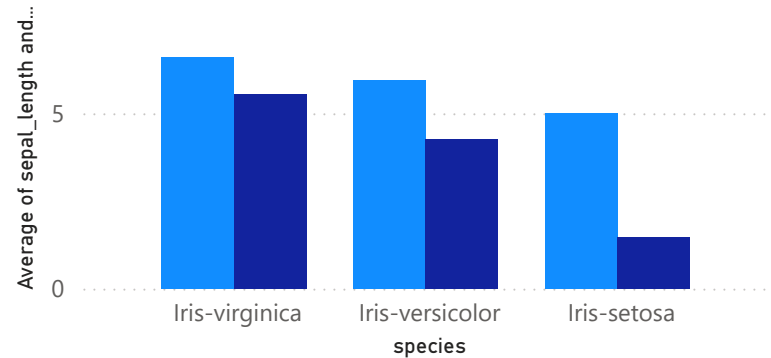
IRIS FLOWER DATASET



Total records : 150
No:of Species : 3
Species : Iris-setosa
Iris-versicolor
iris-virginica

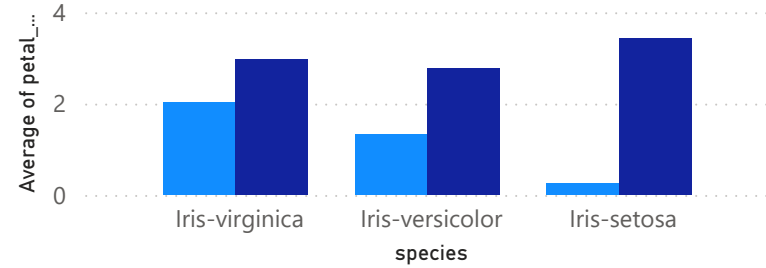
Average of sepal_length and Average of petal_length by species

● Average of sepal_length ● Average of petal_length



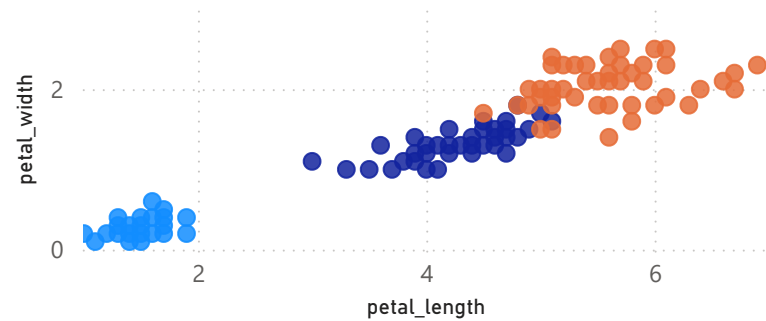
Average of petal_width and Average of sepal_width by species

● Average of petal_width ● Average of sepal_width



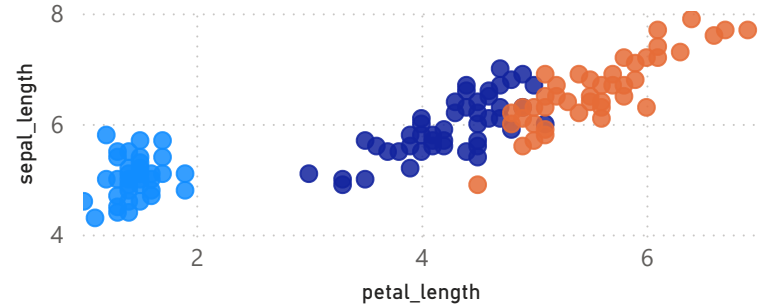
species, petal_length and petal_width

species ● Iris-setosa ● Iris-versicolor ● Iris-virginica

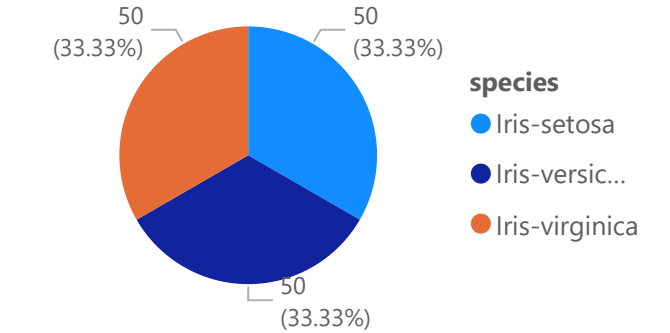


species, petal_length and sepal_length

species ● Iris-setosa ● Iris-versicolor ● Iris-virginica

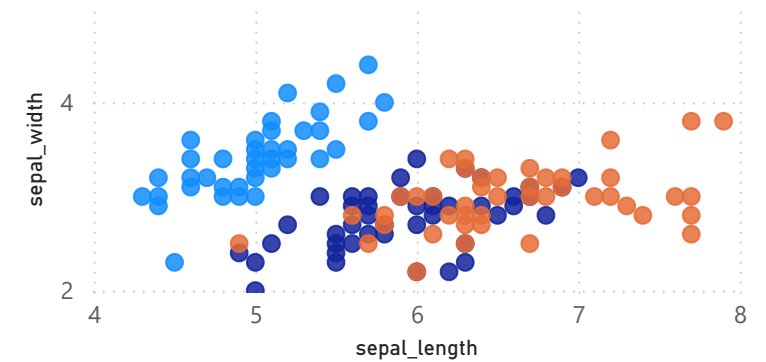


Distribution of IRIS species



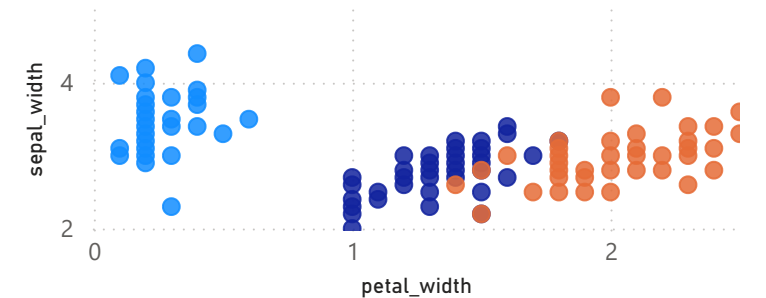
species, sepal_length and sepal_width

species ● Iris-setosa ● Iris-versicolor ● Iris-virginica



species, petal_width and sepal_width

species ● Iris-setosa ● Iris-versicolor ● Iris-virginica



IRIS DATASET

Introduction :

The Iris dataset is a classic dataset in the field of machine learning and statistics, often used for benchmarking algorithms and learning techniques. This dataset comprises 150 samples from three species of iris flowers: Iris-setosa, Iris-versicolor, and Iris-virginica. Each sample includes four features: sepal length, sepal width, petal length, and petal width, measured in centimeters. These features provide valuable information for distinguishing between the different species of iris flowers.

Executive Summary :

The analysis of the Iris dataset aims to provide a comprehensive overview of the key performance indicators (KPIs) related to the characteristics and classification of iris flowers. By examining the statistical measures and relationships between the features, I gain insights into the distinguishing attributes of each iris species.

KPIs:

Sepal Length Stats:

Mean and standard deviation of sepal length for each species:

- Iris-setosa:** Mean = 5.006 cm, Std Dev = 0.352 cm
- Iris-versicolor:** Mean = 5.936 cm, Std Dev = 0.516 cm
- Iris-virginica:** Mean = 6.588 cm, Std Dev = 0.636 cm

Sepal Width Stats:

Mean and standard deviation of sepal width for each species:

- Iris-setosa:** Mean = 3.418 cm, Std Dev = 0.381 cm
- Iris-versicolor:** Mean = 2.770 cm, Std Dev = 0.314 cm
- Iris-virginica:** Mean = 2.974 cm, Std Dev = 0.322 cm

Petal Length Stats:

Mean and standard deviation of petal length for each species:

- Iris-setosa:** Mean = 1.464 cm, Std Dev = 0.174 cm
- Iris-versicolor:** Mean = 4.260 cm, Std Dev = 0.470 cm
- Iris-virginica:** Mean = 5.552 cm, Std Dev = 0.552 cm

Petal Width Stats:

Mean and standard deviation of petal width for each species:

- Iris-setosa:** Mean = 0.244 cm, Std Dev = 0.107 cm
- Iris-versicolor:** Mean = 1.326 cm, Std Dev = 0.198 cm
- Iris-virginica:** Mean = 2.026 cm, Std Dev = 0.275 cm

Species Distribution:

Proportion of each species in the dataset:

- Iris-setosa:** 33.33%
- Iris-versicolor:** 33.33%
- Iris-virginica:** 33.33%

Correlation between Features:

- Correlation matrix showing the relationships between different features:
- Sepal length and petal length: 0.872
- Sepal length and petal width: 0.818
- Petal length and petal width: 0.963
- Sepal width has a weaker negative correlation with petal length (-0.421) and petal width (-0.357)