**Logistic Regression on Iris Dataset (Classification Example)**

**🧠 Goal:**

**Predict the species of an iris flower based on measurements like sepal/petal length and width using Logistic Regression.**

This project applies **Logistic Regression**, a classification algorithm, to the well-known **Iris flower dataset**. The objective is to predict the species of an iris plant based on four flower measurements.

**🧪 Dataset:**

The Iris dataset contains:

* 150 samples
* 4 features: *sepal length, sepal width, petal length, petal width*
* 3 classes: *setosa*, *versicolor*, *virginica*

**⚙️ Model:**

* The dataset is split into training and test sets (80/20).
* A LogisticRegression model is trained and evaluated.
* Accuracy and classification metrics (precision, recall, F1-score) are computed.

**📌 What This Does:**

* Loads the **Iris** dataset (3 classes: *setosa*, *versicolor*, *virginica*)
* Splits it into training and testing data
* Trains a **Logistic Regression** classifier
* Evaluates the model using:
  + **Classification report** (Precision, Recall, F1-score)
  + **Confusion matrix heatmap**

**📊 Visualization:**

A **confusion matrix heatmap** is used to visualize how well the model classified each species.