**Iris Classification using k-NN algorithm**

This project is an example of using the k-nearest neighbors (k-NN) algorithm to classify the species of iris flowers.

**Dataset**

The dataset used in this project is the Iris dataset, which consists of 150 samples of iris flowers. Each sample has four features: sepal length, sepal width, petal length, and petal width. The flowers are classified into three species: Iris setosa, Iris versicolor, and Iris virginica.

**Implementation**

The code uses the k-NN algorithm to classify the species of iris flowers based on their features. The dataset is split into training and testing sets, and a k-NN classifier with k=1 is trained on the training set. The trained model is then used to make predictions on the testing set, and the accuracy of the model is calculated using the **accuracy\_score** function from scikit-learn.

The code also includes an example of how to use the trained model to make predictions on new data.

**Libraries Used**

The following libraries were used in this project:

* numpy
* pandas
* matplotlib
* plotly
* scikit-learn

**Files**

The following files are included in this project:

* **Iris.csv**: The dataset file in CSV format
* **iris\_classification.ipynb**: The Jupyter Notebook file containing the code used in this project

**Usage**

To run the code in this project, you will need to have Jupyter Notebook installed on your system. You can download and install it from the [official website](https://jupyter.org/install).

Once you have Jupyter Notebook installed, you can open the **iris\_classification.ipynb** file in Jupyter Notebook and run the cells to execute the code.

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