

Title: Week 4 Assignment: Deployment on Flask

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Introduction

This document provides a detailed report on the deployment of a machine learning model as a web application using Flask. The Iris dataset was utilized as a toy dataset for training the machine learning model, which was then saved and deployed.

1. Toy Data Selection

The Iris dataset was chosen due to its simplicity and widespread use for educational purposes in machine learning. The dataset includes various measurements of Iris flowers and is ideal for classification tasks.

2. Model Training and Saving

A logistic regression model was trained using the Iris dataset. After achieving satisfactory performance, the model was saved using Python's pickle module for future use in predictions.

3. Flask Web Application Deployment

The saved model was deployed in a Flask web application. The application was set up to receive input data through a web form and use the trained model to predict the Iris species.

4. PDF Report Creation

This report was compiled to include the steps of the deployment process, along with the relevant screenshots to illustrate the workflow.

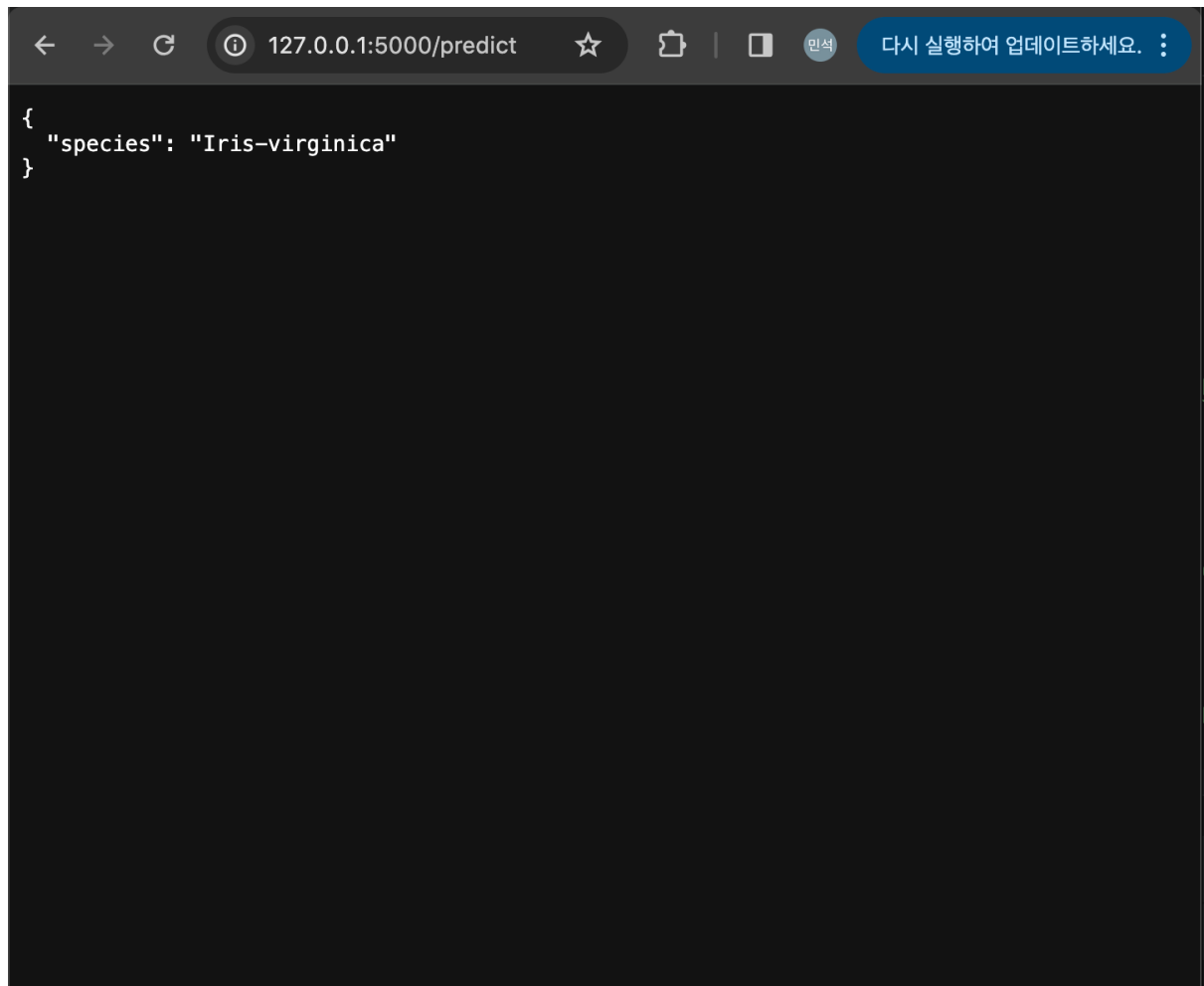
Iris Species Predictor

Sepal Length:

Sepal Width:

Petal Length:

Petal Width:





Iris Species Predictor

Sepal Length:

Sepal Width:

Petal Length:

Petal Width:

Screenshots

Below are the screenshots captured during the deployment process:

Iris Species Predictor

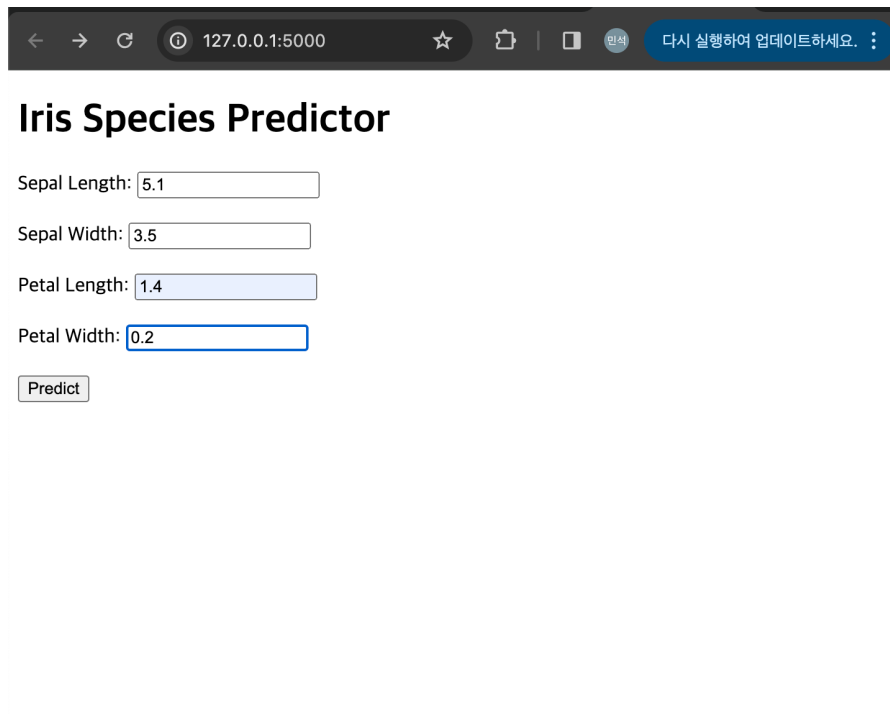
Sepal Length:

Sepal Width:

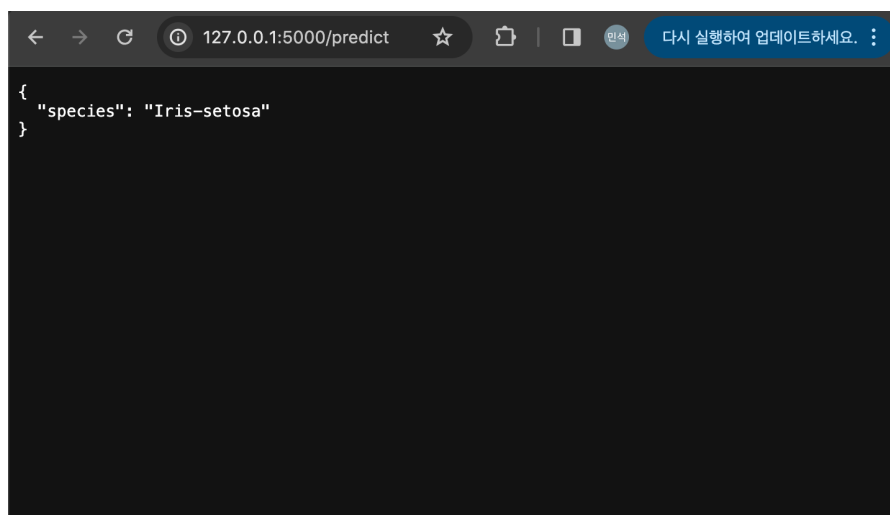
Petal Length:

Petal Width:

```
{  
  "species": "Iris-virginica"  
}
```



The screenshot shows a web browser window with the address bar displaying '127.0.0.1:5000'. The page title is 'Iris Species Predictor'. The form contains four input fields: 'Sepal Length' with value '5.1', 'Sepal Width' with value '3.5', 'Petal Length' with value '1.4', and 'Petal Width' with value '0.2'. A 'Predict' button is located below the inputs. The background of the page is a light blue gradient.



The screenshot shows the same browser window, but the 'Predict' button has been clicked. The response area now displays a JSON object:

```
{  "species": "Iris-setosa"}
```

 The background is a dark blue gradient.

Conclusion

The Flask application successfully serves as an interface for users to input data and receive predictions. The application could be further improved with a user-friendly results page and enhanced styling.