

PORTOFOLIO PROJECT

# Data Secience

Machine Learning Program for Classification  
(Iris Dataset)

Presented By Luh Yuni Pradnyani

LET'S GET STARTED →

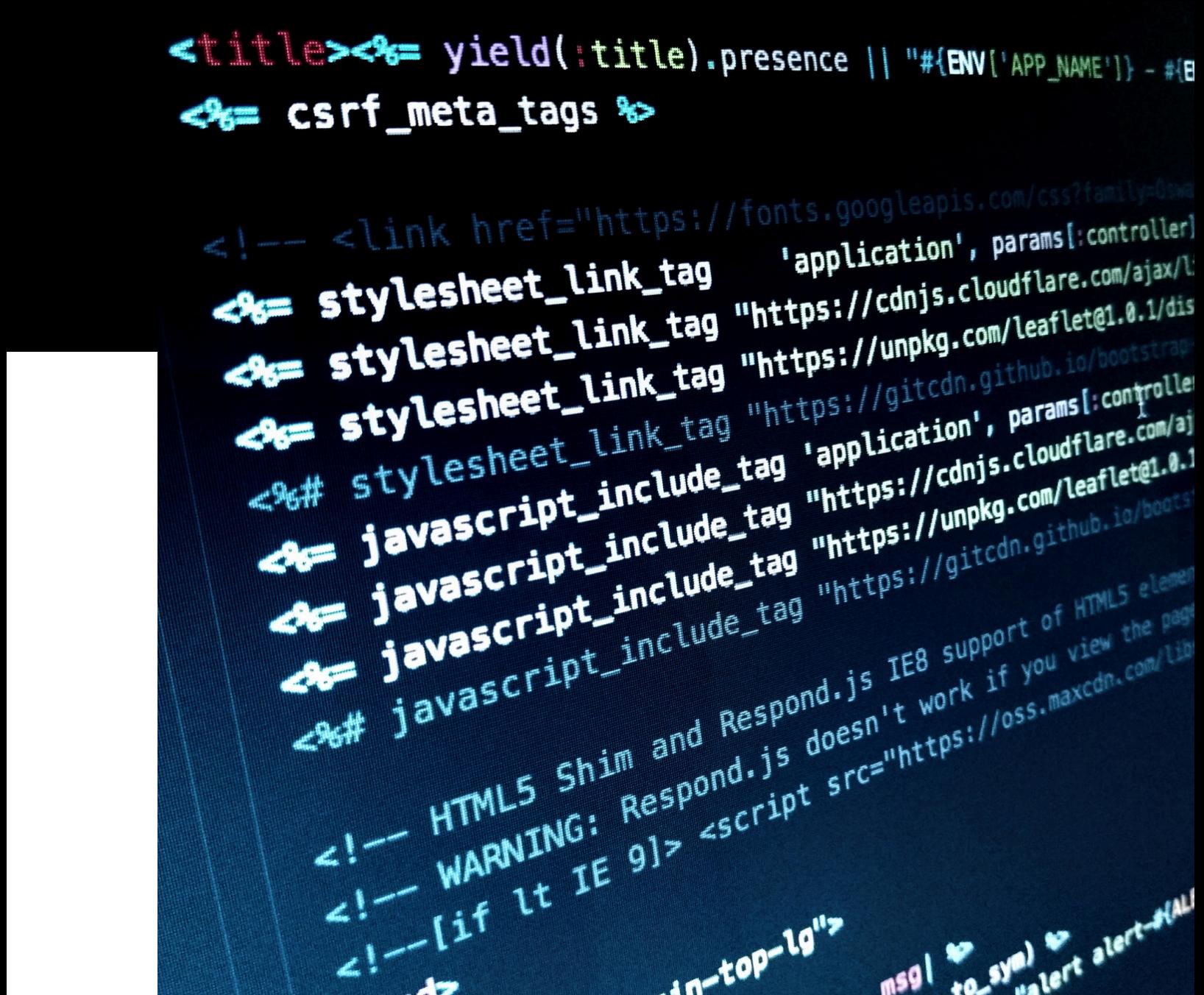


# About Me



Yuni Pradnyani

I am an Informatics Engineering student who has experience in working in teams to complete various projects. Having expertise in web development and office applications, and being able to adapt to the latest technology to support effectiveness and efficiency in every job done.



# Introduction

In this project, the goal is to build a machine learning model that can classify iris flower species based on the measurements of their petals and sepals.

The project uses the well-known Iris dataset, which consists of features like sepal length, sepal width, petal length, and petal width, to predict which species the flower belongs to.

# Iris Dataset

- Dataset: Iris (from Scikit-learn)
- Objective: Predict the species of flowers based on petal and sepal features.
- Algorithm Used: Random Forest Classifier



# Iris Dataset

Number of Samples is 150

Number of Features is 4  
(Sepal Length, Sepal Width, Petal Length, Petal Width)

Number of Classed is  
Setosa, Versicolor,  
and Virginica





# Machine Learning Process

In this project, the machine learning process involves loading the Iris dataset from Scikit-learn, splitting the data into training (70%) and testing (30%) sets, and training the model using the Random Forest Classifier algorithm.

After training, the model's performance is evaluated using metrics such as accuracy, a classification report with precision and recall, and a confusion matrix to visualize prediction results.

# Key Code Snippets



```
from sklearn.datasets import load_iris
from sklearn.ensemble import RandomForestClassifier
from sklearn.metrics import accuracy_score

# Load dataset
data = load_iris()
X, y = data.data, data.target

# Train model
model = RandomForestClassifier(random_state=42)
model.fit(X, y)

# Evaluate model
y_pred = model.predict(X)
print("Accuracy:", accuracy_score(y, y_pred))
```

The program uses the Iris dataset from Scikit-learn to train a Random Forest Classifier.

After training, the model predicts flower species and evaluates its performance using accuracy and detailed classification metrics.

# Evaluation Results

The model achieved 1.0 (100%) accuracy, correctly classifying all flower species. The classification report shows perfect scores, and the confusion matrix confirms no misclassifications, highlighting the model's excellent performance.

```
▶ from sklearn.datasets import load_iris  
from sklearn.ensemble import RandomForestClassifier  
from sklearn.metrics import accuracy_score  
  
# Load dataset  
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X, y = data.data, data.target  
  
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model.fit(X, y)  
  
# Evaluate model  
y_pred = model.predict(X)  
print("Accuracy:", accuracy_score(y, y_pred))
```

→ Accuracy: 1.0

# Conclusion

The model achieved 1.0 (100%) accuracy, demonstrating the effectiveness of the Random Forest Classifier in classifying the Iris dataset. This project highlights the potential of machine learning for solving classification problems with high reliability.



## PORTOFOLIO PROJECT

```
var h = today.getHours();
var m = today.getMinutes();
var s = today.getSeconds();
m = correctTime(m);
s = correctTime(s);
document.getElementById("time").innerHTML =
//calling the function
var t = setTimeout(function() {
    if (s == 59) {
        m++;
        s = 0;
    }
    if (m == 60) {
        h++;
        m = 0;
    }
    document.getElementById("time").innerHTML =
        h + ":" + (m < 10 ? "0" : "") + m + ":" + (s < 10 ? "0" : "") + s;
}, 1000);
```

**Thank You!**

Thank you for taking the time to review this portfolio. I appreciate your attention and hope it demonstrates my ability to develop and implement effective machine learning models.

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