

```
from google.colab import files
uploaded = files.upload()
```

```
import numpy as np
import pandas as pd
import os
import pandas as pd
from sklearn.tree import DecisionTreeClassifier
from sklearn.model_selection import train_test_split
from sklearn import metrics
```

```
diabetes = pd.read_csv('diabetes.csv')
diabetes.head()
```

```
#split dataset in features and target variable
feature_cols=['Pregnancies','Glucose','BloodPressure','SkinThickness','Insulin','
BMI','DiabetesPedigreeFunction','Age']
X = diabetes[feature_cols]
# Features
y = diabetes.Outcome # Target variable
```

```
X.head()
```

```
y.head()
```

```
# Split dataset into training set and test set
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3,
random_state=1) # 70% training and 30% test
```

```
# Create Decision Tree classifier object
clf = DecisionTreeClassifier()

# Train Decision Tree Classifier
clf = clf.fit(X_train,y_train)

#Predict the response for test dataset
y_pred = clf.predict(X_test)
```

```
print("Accuracy:",metrics.accuracy_score(y_test, y_pred))
```

```
from sklearn import tree
text_representation = tree.export_text(clf)
print(text_representation)
```

```
from matplotlib import pyplot as plt
fig = plt.figure(figsize=(100,50))
_ = tree.plot_tree(clf,
                   feature_names=feature_cols,
                   class_names=['0','1'],
                   filled=True)
```

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fig.savefig("decistion_tree.png")
```

```
import pickle

# Save the trained model as a pickle string.
saved_model = pickle.dumps(clf)

# Load the pickled model
clf_from_pickle = pickle.loads(saved_model)

# Use the Loaded pickled model to make predictions
clf_from_pickle.predict(X_test)
```