

MACHINE LEARNING

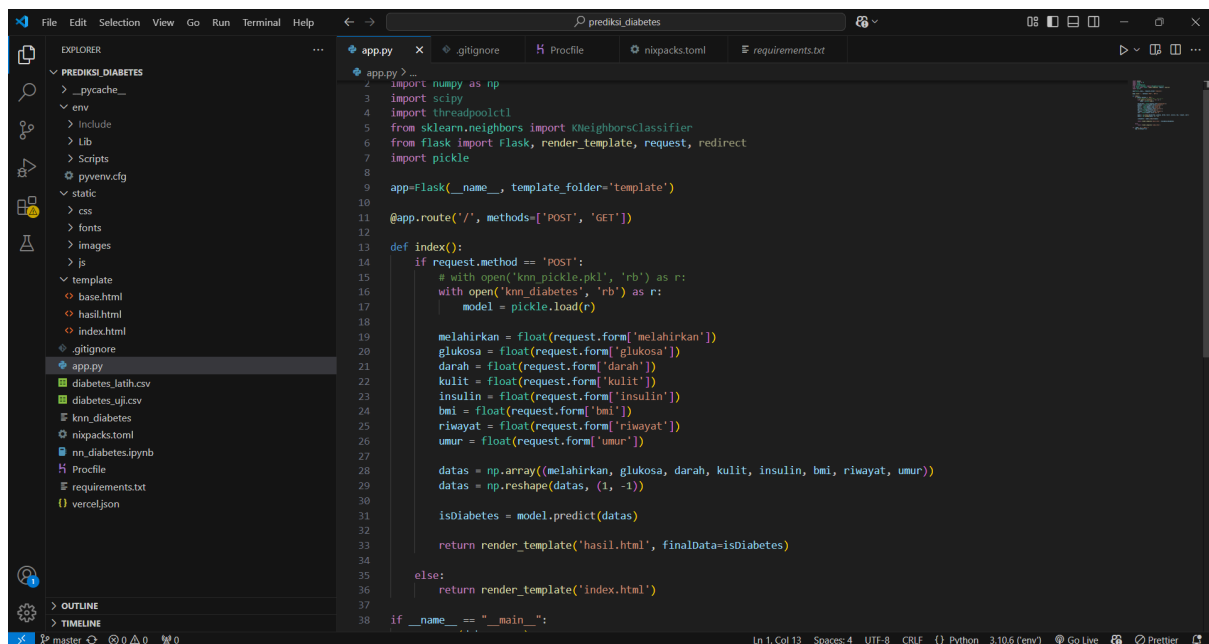
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Kelas : Informatika A2 – 2021

Tugas Pertemuan 15

app.py



```
1 import numpy as np
2 import scipy
3 import threadpoolctl
4 from sklearn.neighbors import KNeighborsClassifier
5 from flask import Flask, render_template, request, redirect
6 import pickle
7
8 app = Flask(__name__, template_folder='template')
9
10 @app.route('/', methods=['POST', 'GET'])
11 def index():
12     if request.method == 'POST':
13         # with open('knn.pickle.pkl', 'rb') as r:
14         with open('knn_diabetes', 'rb') as r:
15             model = pickle.load(r)
16
17         melahirkan = float(request.form['melahirkan'])
18         glukosa = float(request.form['glukosa'])
19         darah = float(request.form['darah'])
20         kulit = float(request.form['kulit'])
21         insulin = float(request.form['insulin'])
22         bmi = float(request.form['bmi'])
23         riwayat = float(request.form['riwayat'])
24         umur = float(request.form['umur'])
25
26         datas = np.array([melahirkan, glukosa, darah, kulit, insulin, bmi, riwayat, umur])
27         datas = np.reshape(datas, (1, -1))
28         isDiabetes = model.predict(datas)
29
30         return render_template("hasil.html", finalData=isDiabetes)
31     else:
32         return render_template("index.html")
33
34 if __name__ == "__main__":
35     ...
```

index.html

The screenshot shows the VS Code editor with the 'index.html' file open. The Explorer sidebar on the left shows the project structure for 'PREDIKSI DIABETES', including files like 'app.py', 'diabetes_jatih.csv', 'nn_diabetes.ipynb', and 'hasil.html'. The main editor area displays the HTML code for 'index.html', which includes a login form with fields for name, glucose level, and blood pressure, and a submit button. The code uses Bootstrap classes for styling and includes a login slide animation.

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```

hasil.html

The screenshot shows the VS Code editor with the 'hasil.html' file open. The Explorer sidebar on the left shows the project structure for 'PREDIKSI DIABETES', including files like 'app.py', 'diabetes_jatih.csv', 'nn_diabetes.ipynb', and 'hasil.html'. The main editor area displays the HTML code for 'hasil.html', which includes a form for inputting data and a submit button. The code uses Bootstrap classes for styling and includes a login slide animation.

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```

nn_diabetes.ipynb

```
app.py nn_diabetes.ipynb X .gitignore Procfile nixpacks.toml
nn_diabetes.ipynb > ...
+ Code + Markdown | ▶ Run All | Clear All Outputs | Outline ...
Select Kernel

import pandas as pd
import numpy as np

df = pd.read_csv('./diabetes_latih.csv')

X_train = df.values
X_train = np.delete(X_train,8,axis=1)

y_train = df['Outcome'].values

df = pd.read_csv('./diabetes_uji.csv')

X_test = df.values
X_test = np.delete(X_test,8,axis=1)

y_test = df['Outcome'].values

#df.head()
#print(X_train)

[3] Python

from sklearn.preprocessing import MinMaxScaler

X_train = MinMaxScaler().fit_transform(X_train)
X_test = MinMaxScaler().fit_transform(X_test)

print(X_train)

[4] Python

... [[0.47058824 0.94472362 0.68421053 ... 0.71385991 0.02519214 0.36666667]
[0.41176471 0.7638191 0.77192982 ... 0.74515648 0.11058924 0.25 ]
[0.11764706 0.49748744 0.45614035 ... 0.36661699 0.23868488 0. ]]
```

```
[0.29411765 0.6080402 0.63157895 ... 0.390462 0.07130658 0.15 ]
[0.05882353 0.63316583 0.52631579 ... 0.4485842 0.11571307 0.43333333]
[0.05882353 0.46733668 0.61403509 ... 0.45305514 0.10119556 0.03333333]]

from sklearn.neural_network import MLPClassifier

clf = MLPClassifier(hidden_layer_sizes=3,learning_rate_init=0.1,max_iter=100)

clf.fit(X_train, y_train)

[5] Python

...
MLPClassifier
MLPClassifier(hidden_layer_sizes=3, learning_rate_init=0.1, max_iter=100)

y_pred = clf.predict(X_test)

[6] Python

from sklearn.metrics import accuracy_score

round(accuracy_score(y_test,y_pred),3)

[7] Python

... 0.649

df.info()

[8] Python

... <class 'pandas.core.frame.DataFrame'>
```

```
... <class 'pandas.core.frame.DataFrame'>
RangeIndex: 154 entries, 0 to 153
Data columns (total 9 columns):
#   Column                Non-Null Count  Dtype
---  -
0   Pregnancies            154 non-null    int64
1   Glucose                154 non-null    int64
2   BloodPressure          154 non-null    int64
3   SkinThickness          154 non-null    int64
4   Insulin                154 non-null    int64
5   BMI                   154 non-null    float64
6   DiabetesPedigreeFunction 154 non-null    float64
7   Age                   154 non-null    int64
8   Outcome               154 non-null    int64
dtypes: float64(2), int64(7)
memory usage: 11.0 KB
```

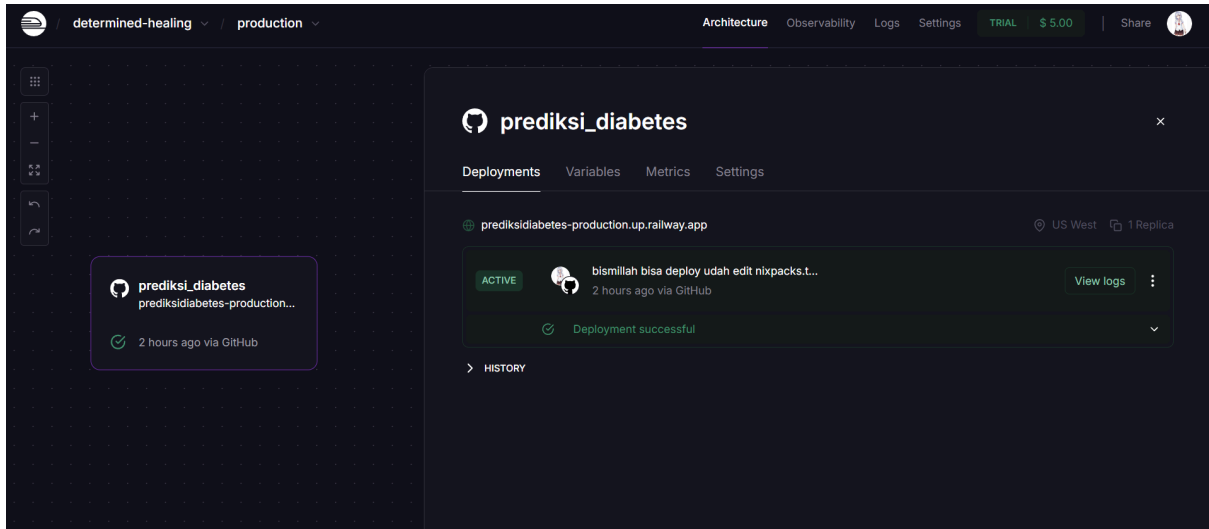
```
model = clf.fit(x_train, y_train)
```

```
import pickle

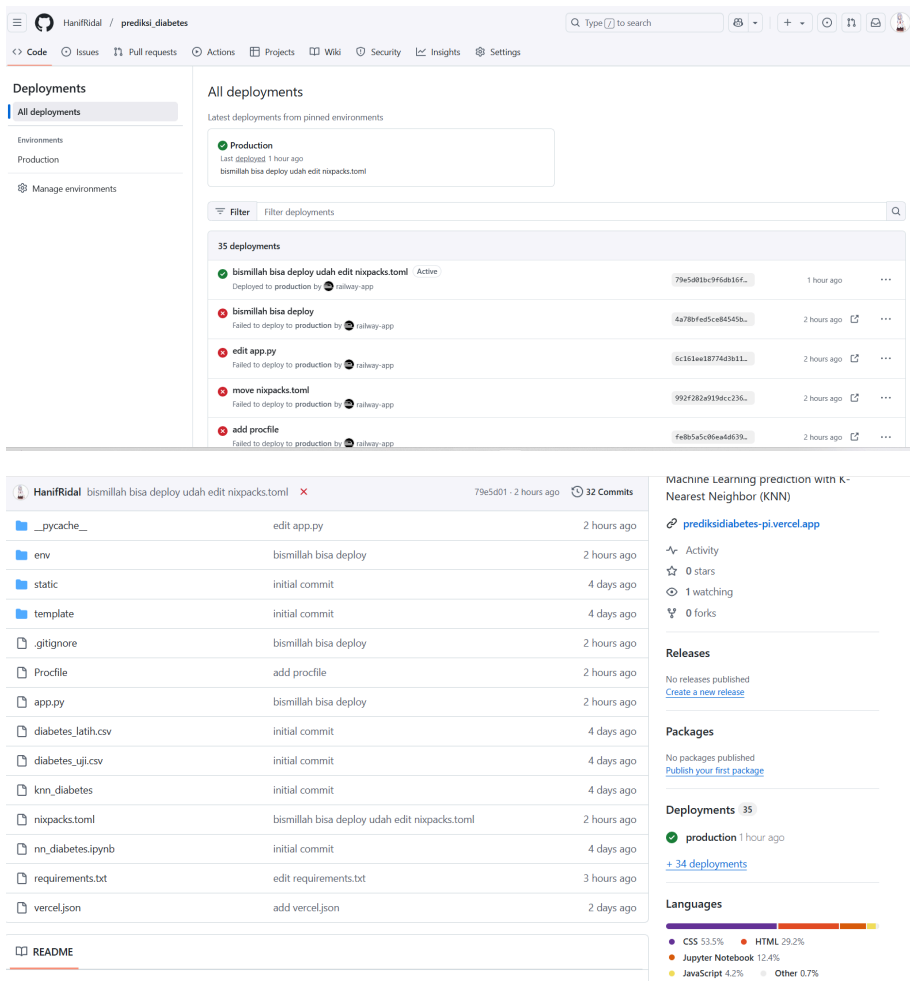
pickle.dump(clf, open('nn_diabetes.pkl', "wb"))
```

DEPLOYMENT

railway.com



github-repo



HASIL POSITIF DIABETES

data uji

8,183,64,0,0,23.3,0.672,32,1

implementasi



HASIL NEGATIF DIABETES

data uji

1,89,66,23,94,28.1,0.167,21,0

implementasi

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Deteksi Diabetes!

1	94
89	28.1
66	0.167
23	21

PREDIKSI

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NEGATIF DIABETES

SELESAI