Model Deployment Documentation

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Batch Code: LISUM35

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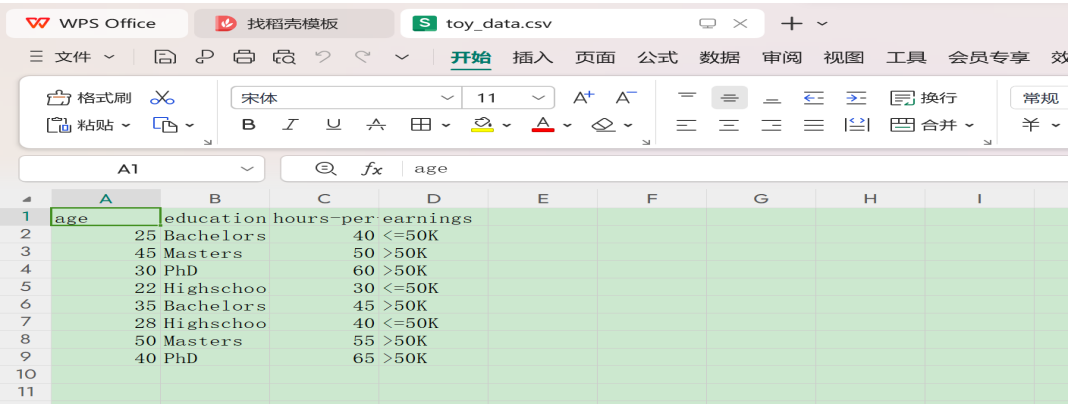
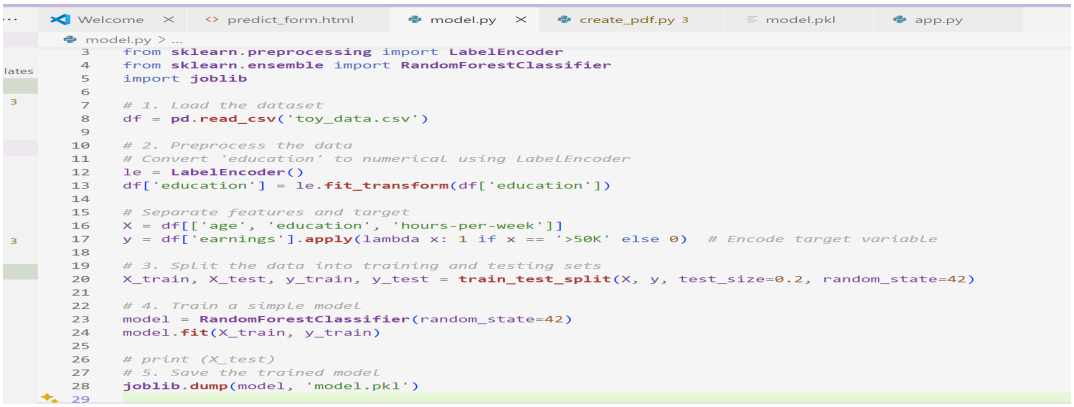
Submitted To: Data_Glacier

Snapshot of Data Preparation:



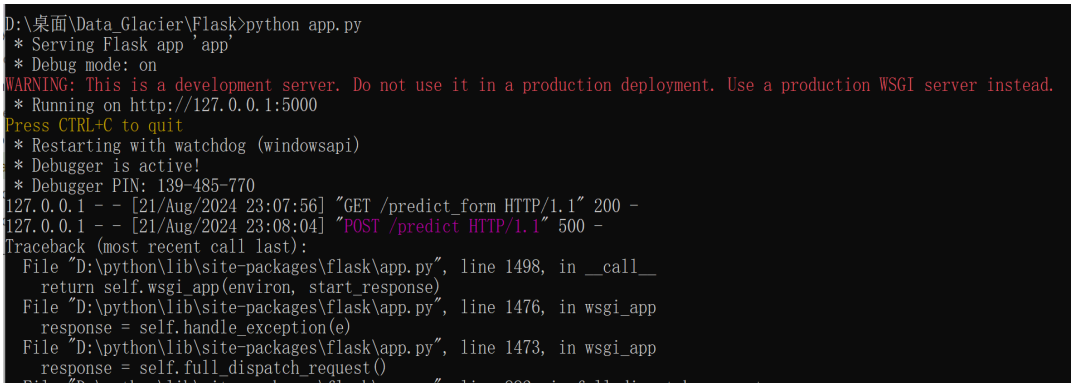
	A	B	C	D	E	F	G	H	I
1	age	education	hours-per	earnings					
2	25	Bachelors	40	<=50K					
3	45	Masters	50	>50K					
4	30	PhD	60	>50K					
5	22	Highschoo	30	<=50K					
6	35	Bachelors	45	>50K					
7	28	Highschoo	40	<=50K					
8	50	Masters	55	>50K					
9	40	PhD	65	>50K					
10									
11									

Snapshot of Model Training:



```python
from sklearn.preprocessing import LabelEncoder
from sklearn.ensemble import RandomForestClassifier
import joblib

# 1. Load the dataset
df = pd.read_csv('toy_data.csv')

# 2. Preprocess the data
# Convert 'education' to numerical using LabelEncoder
le = LabelEncoder()
df['education'] = le.fit_transform(df['education'])

# Separate features and target
X = df[['age', 'education', 'hours-per-week']]
y = df['earnings'].apply(lambda x: 1 if x == '>50K' else 0)  # Encode target variable

# 3. Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# 4. Train a simple model
model = RandomForestClassifier(random_state=42)
model.fit(X_train, y_train)

# print (X_test)
# 5. Save the trained model
joblib.dump(model, 'model.pkl')
```

Snapshot of Flask Deployment:



```
D:\桌面\Data_Glacier\Flask>python app.py
 * Serving Flask app 'app'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with watchdog (windowsapi)
 * Debugger is active!
 * Debugger PIN: 139-485-770
127.0.0.1 - - [21/Aug/2024 23:07:56] "GET /predict_form HTTP/1.1" 200 -
127.0.0.1 - - [21/Aug/2024 23:08:04] "POST /predict HTTP/1.1" 500 -
Traceback (most recent call last):
  File "D:\python\lib\site-packages\flask\app.py", line 1498, in __call__
    return self.wsgi_app(environ, start_response)
  File "D:\python\lib\site-packages\flask\app.py", line 1476, in wsgi_app
    response = self.handle_exception(e)
  File "D:\python\lib\site-packages\flask\app.py", line 1473, in wsgi_app
    response = self.full_dispatch_request()
```

Snapshot of Webpage: