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import pandas as pd

from sklearn.ensemble import RandomForestClassifier

from sklearn.model_selection import train_test_split

from sklearn.preprocessing import LabelEncoder


# Load data

data = pd.read_csv("EX10.csv")

data["Marital_Status"] = LabelEncoder().fit_transform(data["Marital_Status"])


# Split into input and output

attributes = data.drop("Eligible", axis=1)

target = data["Eligible"]


# Train-test split

attr_train, attr_test, target_train, target_test = train_test_split(attributes, target, test_size=0.2)


# Model training

model = RandomForestClassifier()

model.fit(attr_train, target_train)


# Example input

user = {

    "Age": 30,

    "Income": 40000,

    "Credit_Score": 700,

    "Loan_Amount": 10000,

    "Existing_Loans": 1,

    "Employment_Years": 5,

    "Marital_Status": 1, # 0=Single, 1=Married, 2=Divorced
```

```
"Has_House": 1,  
"Has_Car": 0  
}
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# Prediction
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user_df = pd.DataFrame([user])
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result = model.predict(user_df)[0]
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print("Eligible" if result == 1 else "Not Eligible")
```