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Load the Dataset

```
import pandas as pd
df = pd.read_csv('toy_dataset.csv')
print(df.head())
```

Preparation for model

```
df.loc[df['Illness'] == 'No', 'Illness'] = 0
df.loc[df['Illness'] == 'Yes', 'Illness'] = 1
```

```
x = df[['Age','Illness']]
print(x.head())
```

```
y = df['Income']
print(y.head())
```

Train the model

```
from sklearn.model_selection import train_test_split
```

```
x_train, x_test, y_train, y_test = train_test_split(x, y,test_size=0.55)
print(x_train.shape)
print(x_train.head())
print(x_test.shape)
print(x_test.head())
print(y_train.shape)
print(y_train.head())
print(y_test.shape)
print(y_test.head())
```

```
from sklearn.ensemble import RandomForestClassifier
model = RandomForestClassifier()
```

Model Creation

```
model.fit(x_train, y_train)
model.score(x_train,y_train)
```

```
predictions = model.predict(X_test)
predictions[:10]
```

Save the model

```
import pickle
pickle.dump(model,'./output/randomforest_model.pkl')
```

Create app.py

```
from flask import Flask
app = Flask(__name__)
@app.route('/')
def index():
    return flask.render_template('index.html')
@app.route('/predict', methods=['POST'])
def predict():
    to_predict_list = request.form.to_dict()
    review_text = pre_processing(to_predict_list['review_text'])
    prob = clf.predict_proba(count_vect.transform([review_text]))
    if prob[0][0]>=0.5:
        prediction = "Positive"
    else:
        prediction = "Negative"
    return flask.render_template('predict.html', prediction = prediction, prob =np.round(prob[0][0],3)*100)
```

Create index.html

```
<html>
<body>
    <h3>Iris Species Classification</h3>
<div>
  <form action="/predict" method="POST">
    <label for="seplen">income</label>
    <input type="number" step="0.01" id="seplen" name="seplen">
    <br>
    <label for="sepwid">age</label>
    <input type="number" step="0.01" id="sepwid" name="sepwid">
    <br>
    <label for="petlen">illness</label>
    <input type="number" step="0.01" id="petlen" name="petlen">
    <br>
    <label for="petwid">city</label>
    <input type="number" step="0.01" id="petwid" name="petwid">
    <br>
    <input type="submit" value="Submit">
  </form>
</div>
</body>
</html>
```

Create predict.html

```
<!doctype html>
<html>
   <body>
      <h1> {{ prediction }}</h1>
   </body>
</html>
```