```
import pandas as pd from
sklearn.model_selection import
train_test_split from sklearn.linear_model
import LogisticRegression from
sklearn.metrics import classification_report,
confusion_matrix import matplotlib.pyplot
as plt



data = {     'weather': [0, 1, 1, 0, 2, 2, 1, 0, 1,
2],  # 0: Clear, 1: Rain, 2: Fog     'light': [0, 1,
1, 0, 1, 0, 1, 0, 0, 1],    # 0: Daylight, 1: Night
'speed_limit': [30, 40, 50, 30, 40, 30, 50, 30,
30, 50],     'accident': [0, 1, 1, 0, 1, 0, 1, 0, 0, 1]
# 0: No Accident, 1: Accident }
```

```
df = pd.DataFrame(data)


X = df[['weather', 'light', 'speed_limit']] y =
df['accident']


X_train, X_test, y_train, y_test =
train_test_split(X, y, test_size=0.3,
random_state=42)


model = LogisticRegression()
model.fit(X_train, y_train)

y_pred = model.predict(X_test)
print("Confusion Matrix:\n",
confusion_matrix(y_test, y_pred))
print("\nClassification Report:\n",
classification_report(y_test, y_pred))


coefficients = model.coef_[0] features =
X.columns plt.bar(features, coefficients)
plt.title("Feature Influence on Accident
Prediction") plt.xlabel("Features")
plt.ylabel("Coefficient Value") plt.show()
```