Traffic Intelligence: Advanced Traffic Volume Estimation with Machine Learning

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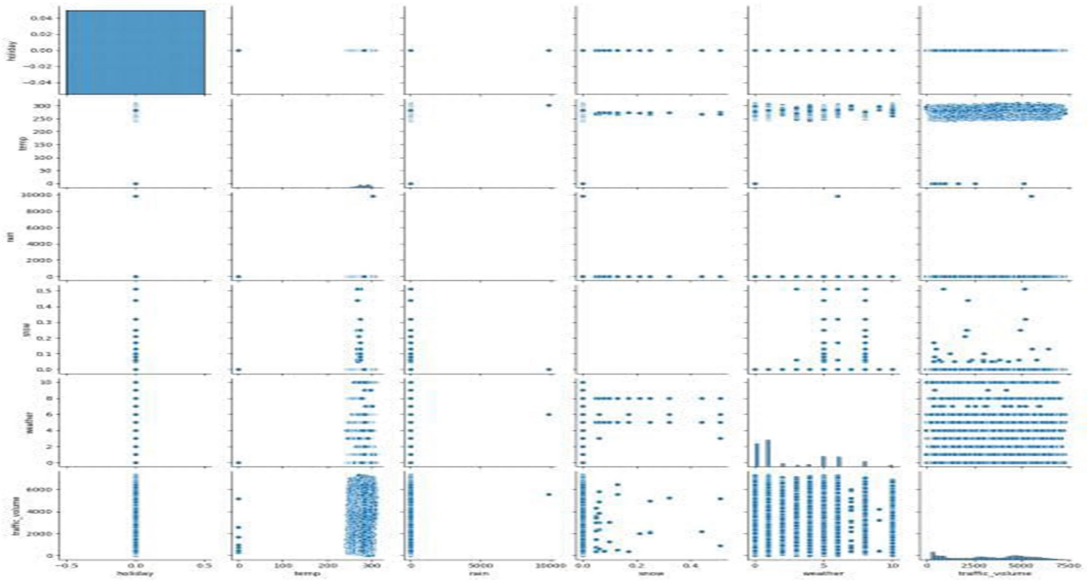
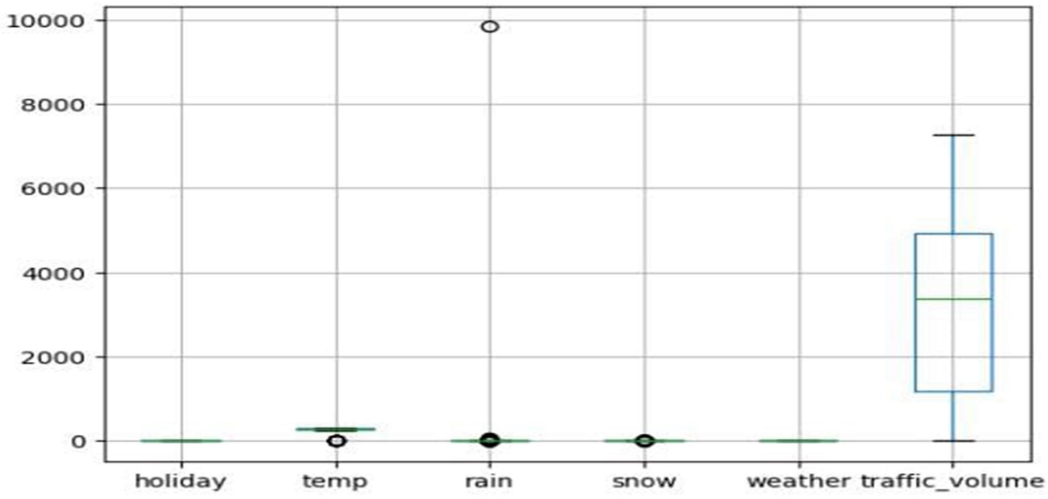
MY TASKS:

TSK-338838:

Data Visualization





TSK-338843:

Model Evaluation

[28]:
```
from sklearn import metrics

# R² Score on training predictions
print("Linear Regression R² on training set:", metrics.r2_score(y_train, p1))
print("Decision Tree R² on training set:", metrics.r2_score(y_train, p2))
print("Random Forest R² on training set:", metrics.r2_score(y_train, p3))
print("SVR R² on training set:", metrics.r2_score(y_train, p4))
print("XGBoost R² on training set:", metrics.r2_score(y_train, p5))
```

```
Linear Regression R² on training set: 0.13296715651758817
Decision Tree R² on training set: 1.0
Random Forest R² on training set: 0.9774641542381987
SVR R² on training set: 0.25417555904090483
XGBoost R² on training set: 0.8734947443008423
```

[29]:
```
p1=lin_reg.predict(x_test)
p2=Dtree.predict(x_test)
p3=Rand.predict(x_test)
p4=svr.predict(x_test)
p5=XGB.predict(x_test)

print(metrics.r2_score(y_test, p1))
print(metrics.r2_score(y_test, p2))
print(metrics.r2_score(y_test, p3))
print(metrics.r2_score(y_test, p4))
print(metrics.r2_score(y_test, p5))
```

```
0.13558012821266197
0.6881461887460081
0.8391783560539203
0.25808608029636915
0.8377184271812439
```

[30]:
```
MSE=metrics.mean_squared_error(p3,y_test)
np.sqrt(MSE)
```

[30]: np.float64(793.0544564468826)

TSK-338844:

Save the Model

[31]:
```
import pickle

pickle.dump(Rand,open("model.pkl",'wb'))
pickle.dump(le,open("encoder.pkl",'wb'))
```

[ ]:
```

```