

Traffic Intelligence: Advanced Traffic Volume Estimation with Machine Learning

MENTOR: SRI L.LAKSHMI NARAYANA

TEAM ID: LTVIP2025TMID40409

TEAM MEMBER:

3) YELETI SUDHARANI



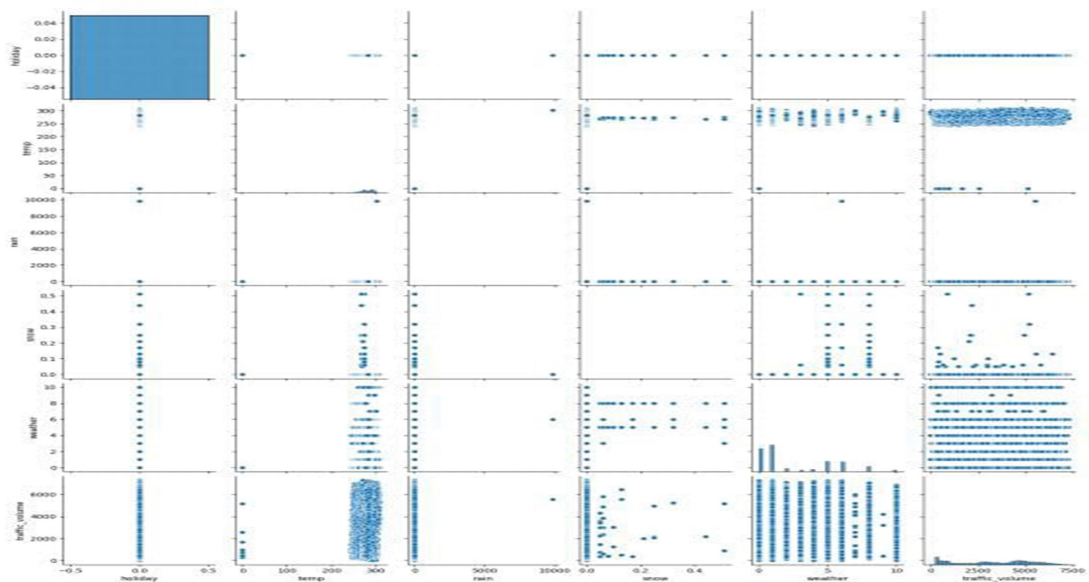
Roll Number: SBAP0040406

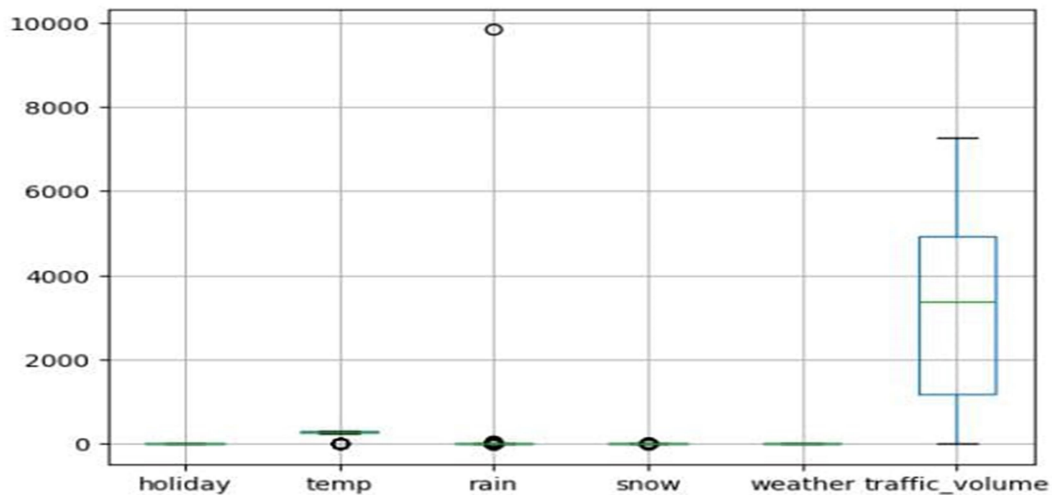
MAIL ID: yeletisudharani08@gmail.com

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'))
```

```
[ ]:
```