

Predict Traffic Volume using time Series models

Traffic-Related Time Series Forecasting Project

NUHA ALOQAYLI
RAHAF ALSHALAHI
ALANOUD BASULAIMAN
SADEEM ALMESNED

Introduction

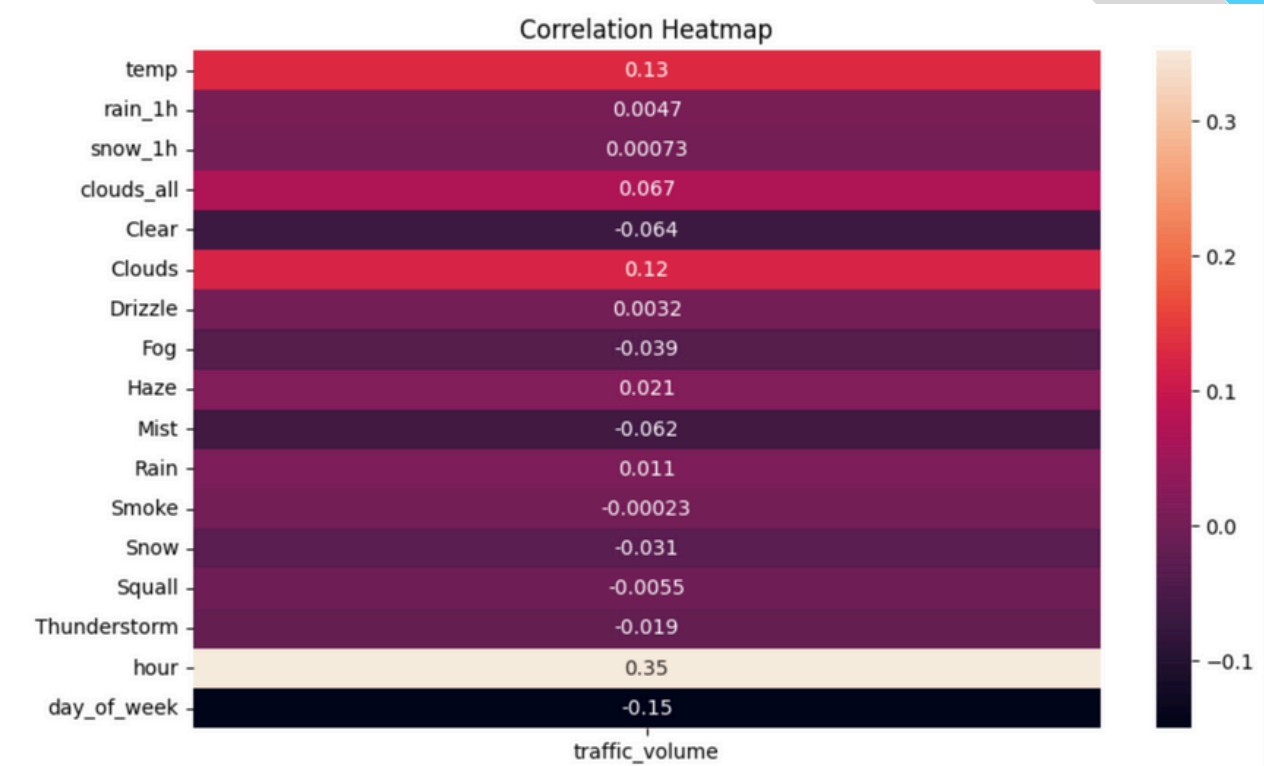
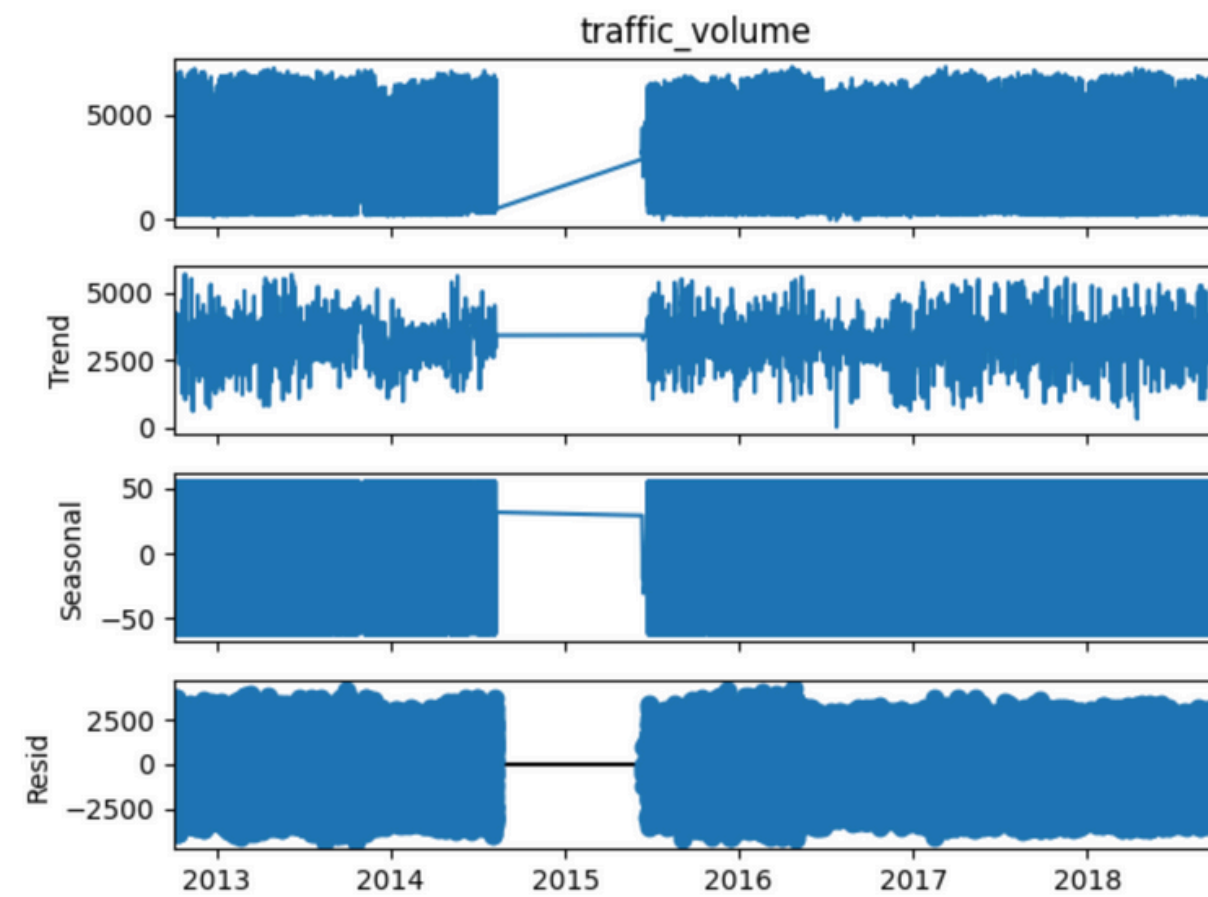
The goal of this project is to predict traffic volume using techniques from a Traffic-Related Time Series Forecasting



Dataset Overview

- We used the Metro Interstate Traffic Volume Dataset from Kaggle

Exploratory Data Analysis (EDA)



RNN

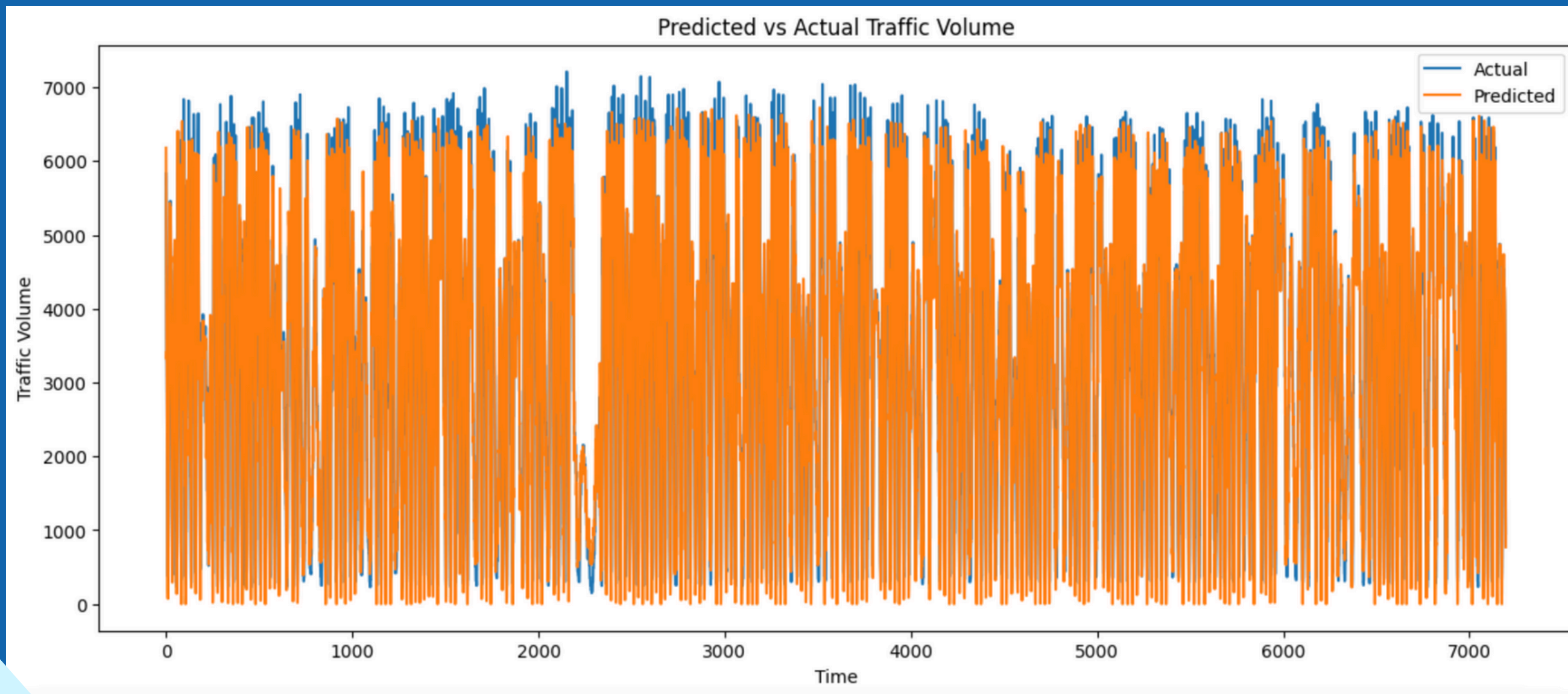
the first model

Target : predict the traffic volume depends on previous datetime values.

MAE	MSE	RMSE	MAPE
343.50	228374.87	477.88	0.2119

RNN

the first model



LSTM

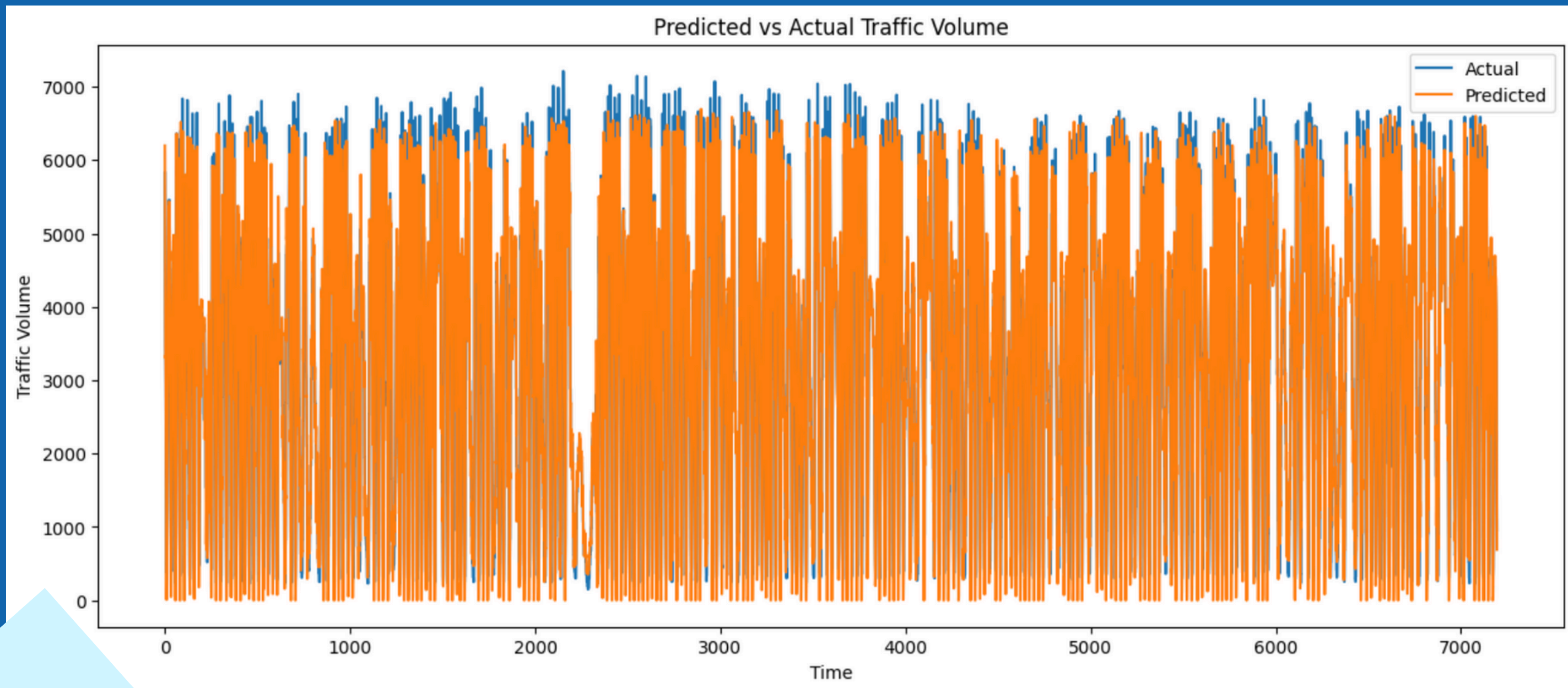
the second model

Target : predict the traffic volume depends on previous datetime values.

MAE	MSE	RMSE	MAPE
371.19	257750.98	507.69	0.2206

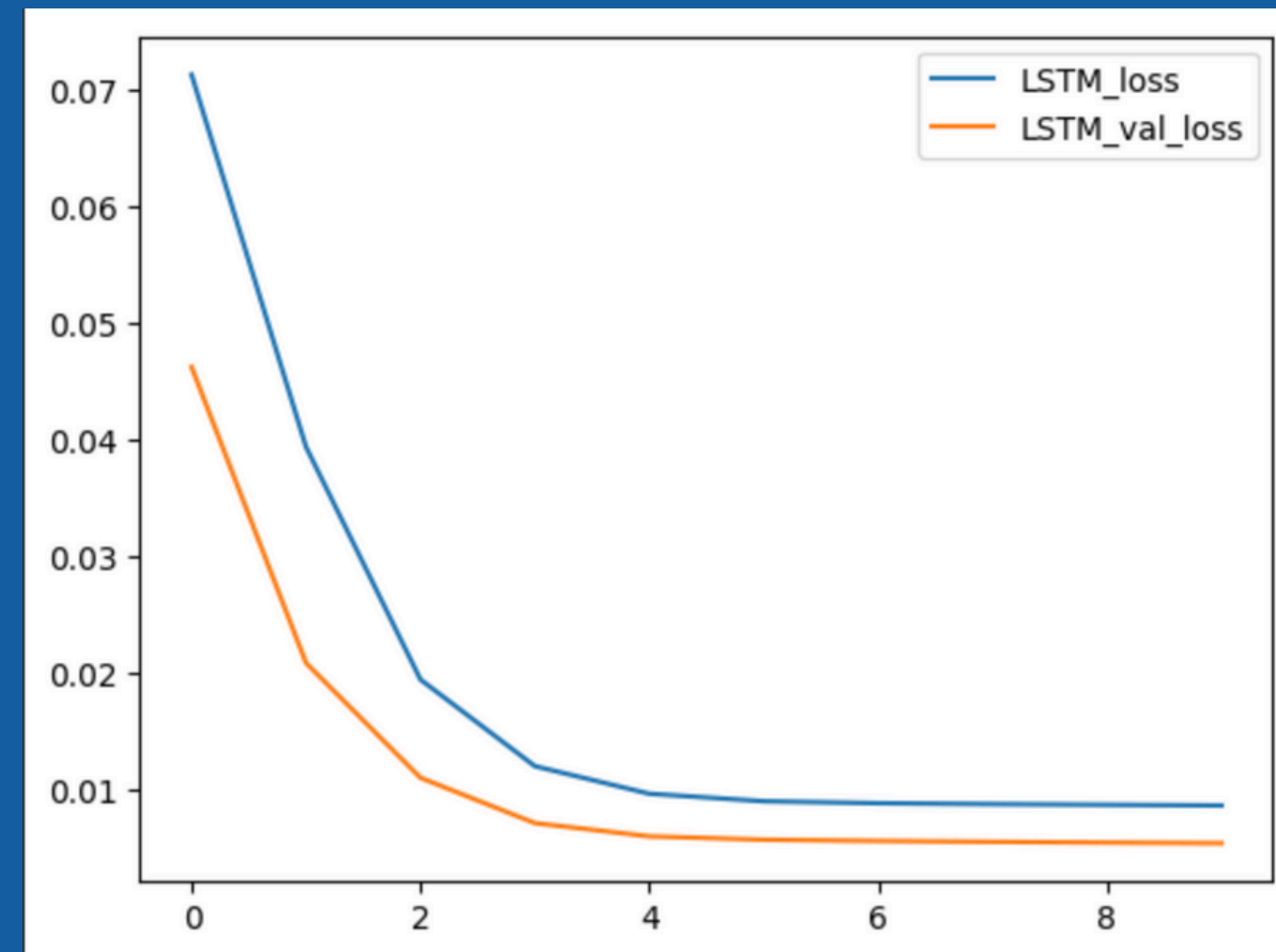
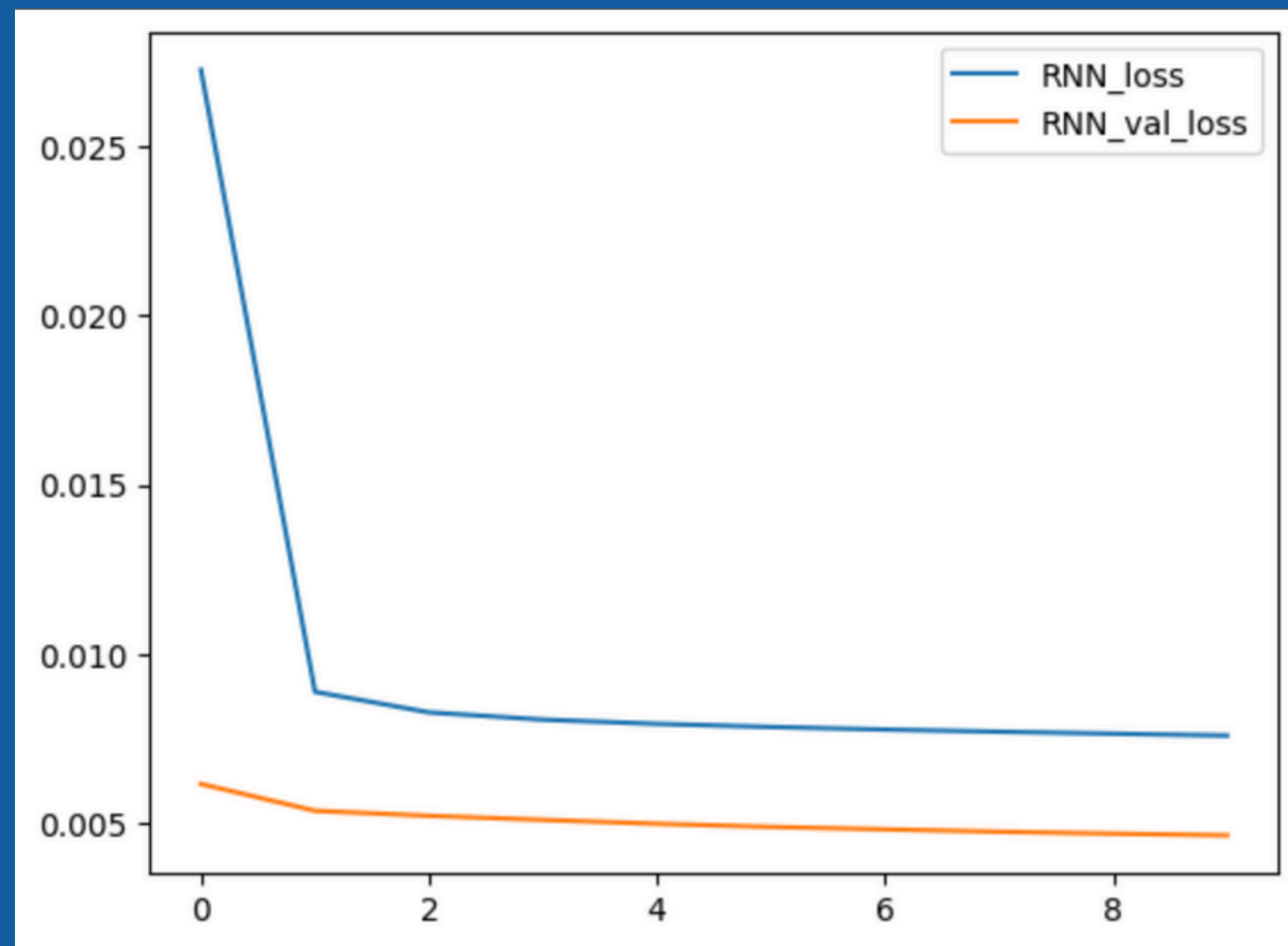
LSTM

the second model



Models Comparison

Loss and the validation loss between the two models



Challenges and Solutions

Dataset

Finds appropriate dataset based on our idea

Splitting data

there are many way to splitting the data, moreover in time series the data should be in order when you splitting the data.

Data shape

reshape data to fit in your model.

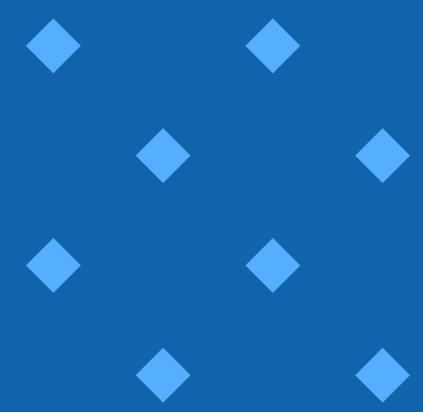
Accuracy

trying to find the best accuray by applying diffrent models.



Conclusion

Key Findings

- There is no big difference between the two models, both models gave fairly good results.
- 
- 



**Thank you
for listening!**