Traffic Sign Recognition

Faculty of Computers & Artificial Intelligence

Selected 1

Repository Link: https://github.com/mahmoudhaney/TrafficSignRecognition

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Dataset Information

Name

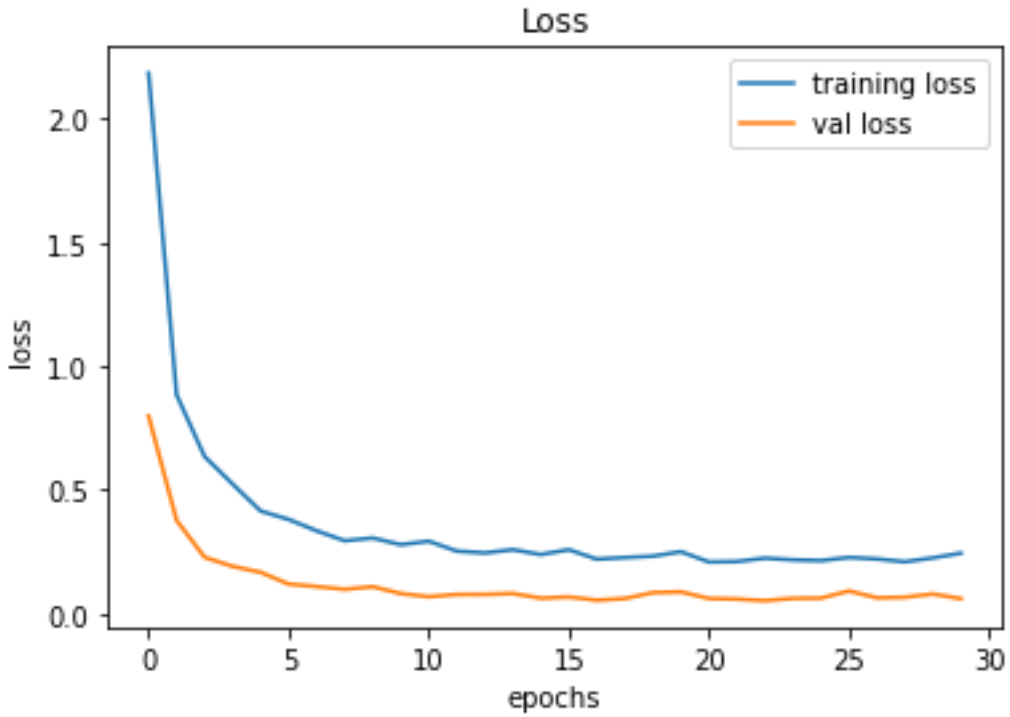
Traffic Sign Recognition

Total Dataset → **39209**

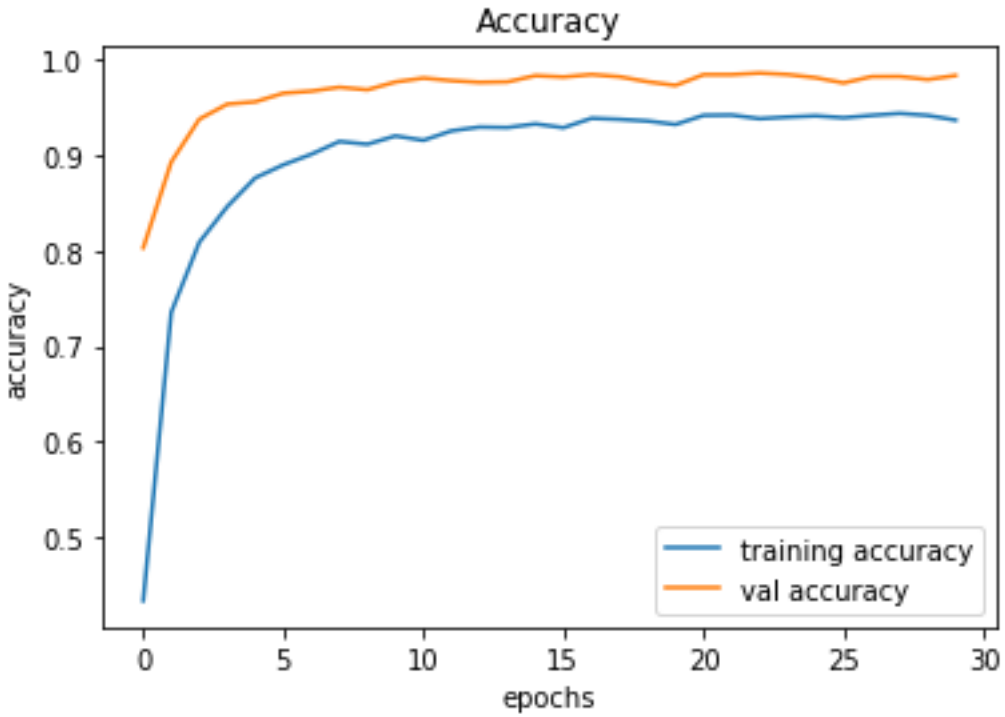
Training Data → **31367**

Validation Data → **7842**

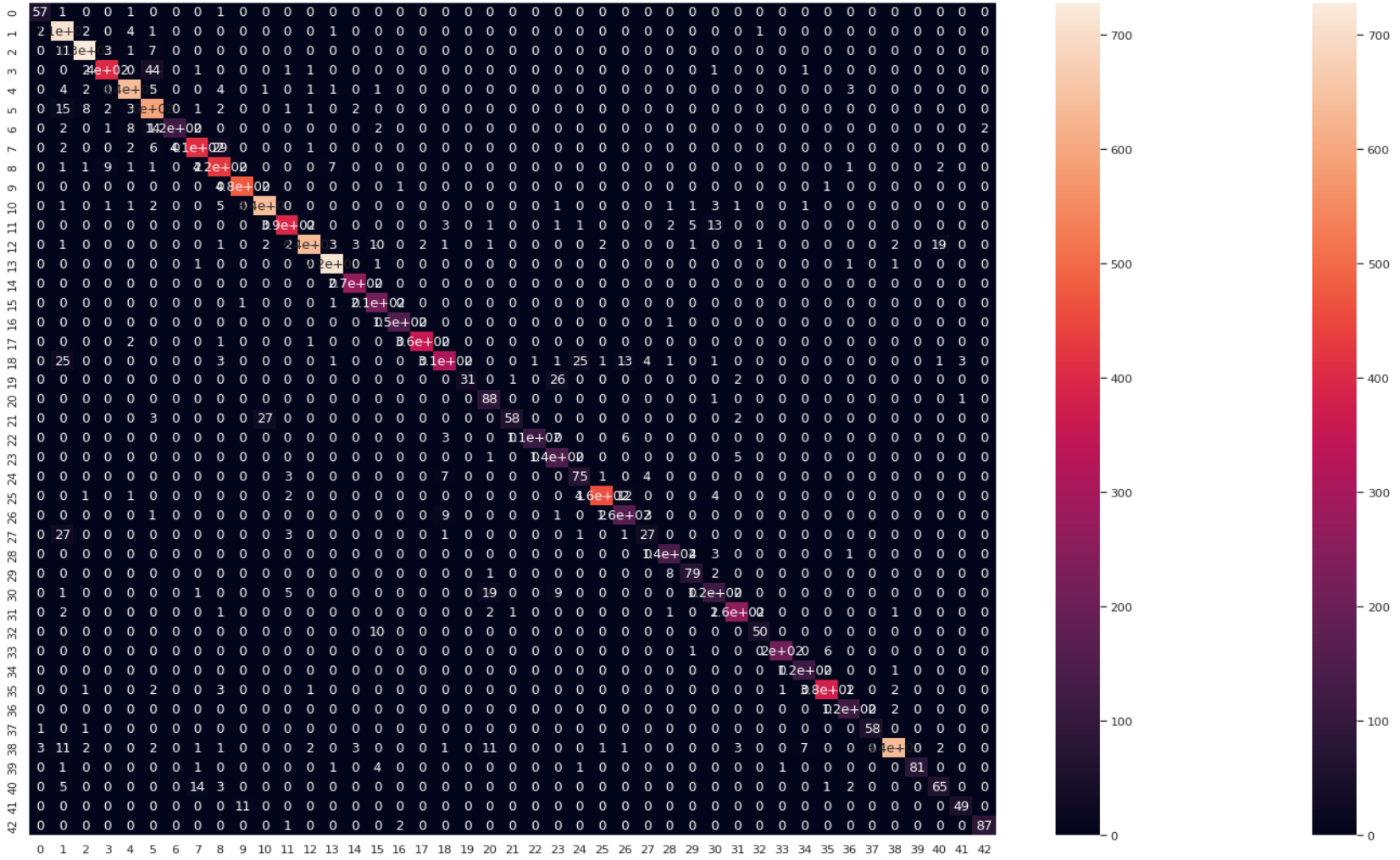
Loss Curve

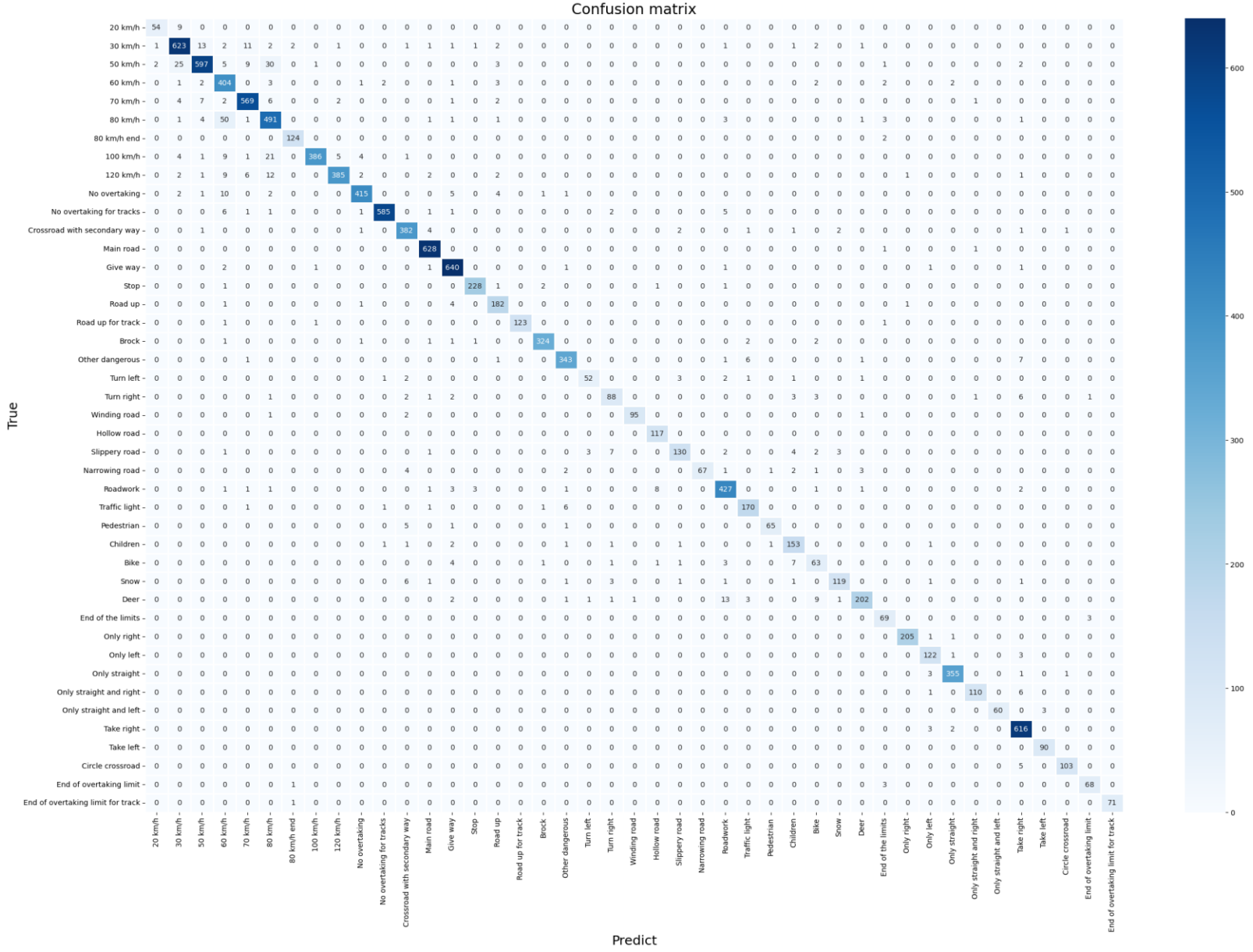

Loss
training loss
val loss
loss
epochs
0.0
0.5
1.0
1.5
2.0
0
5
10
15
20
25
30

Accuracy Curve



Confusion Matrix




Confusion matrix
True
Predict
20 km/h
30 km/h
50 km/h
60 km/h
70 km/h
80 km/h
80 km/h end
100 km/h
120 km/h
No overtaking
No overtaking for tracks
Crossroad with secondary way
Main road
Give way
Stop
Road up
Road up for track
Brock
Other dangerous
Turn left
Turn right
Winding road
Hollow road
Slippery road
Narrowing road
Roadwork
Traffic light
Pedestrian
Children
Bike
Snow
Deer
End of the limits
Only right
Only left
Only straight
Only straight and right
Only straight and left
Take right
Take left
Circle crossroad
End of overtaking limit
End of overtaking limit for track
0
100
200
300
400
500
600

Hyperparameters

Resize Image → 32 * 32

Num of Epochs → 30 epochs – For NN

Learning Rate → 0.25 --> 0.5 – For NN

Before

Accuracy for SVM Model: 93%

Training Data: 70%

Image Size: 40 * 40

After

Accuracy for SVM Model: 99%

Training Data: 80%

Image Size: 32 * 32