

# *Signs traffic Classification*

## *CNN Model*

Team Member:

Raghad, Sama and Rehab

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Problem statement

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# Problem statement

- **Variability in Lighting and Weather**
- **Different Angles and Distances**
- **Occlusions**

Speed limit (30km/h)



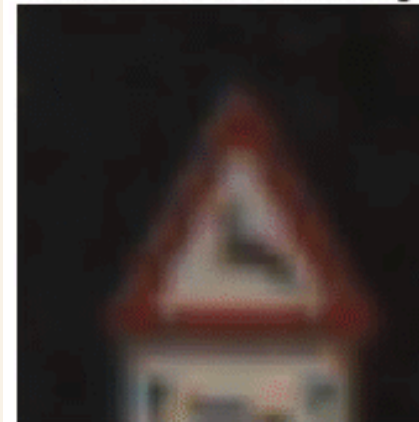
Pedestrians



Bumpy road



Wild animals crossing



No passing



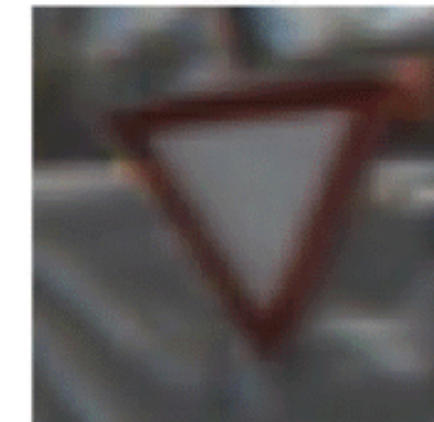
General caution



Beware of ice/snow



Yield



Turn right ahead



# Dataset

## Traffic Sign Dataset - Classification

traffic Sign Data:

1- DATA

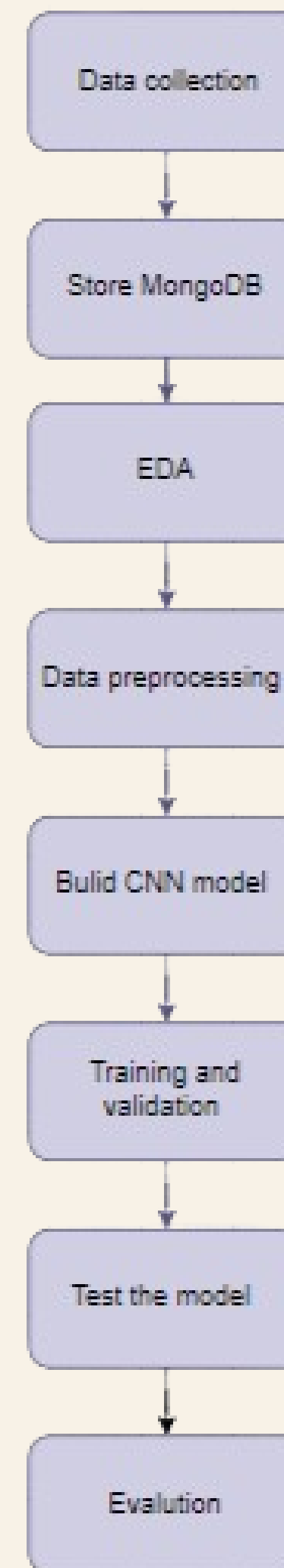
2- TEST

labels.csv

kaggle

# Methodology

## *CNN Model*



# Results

Large dataset

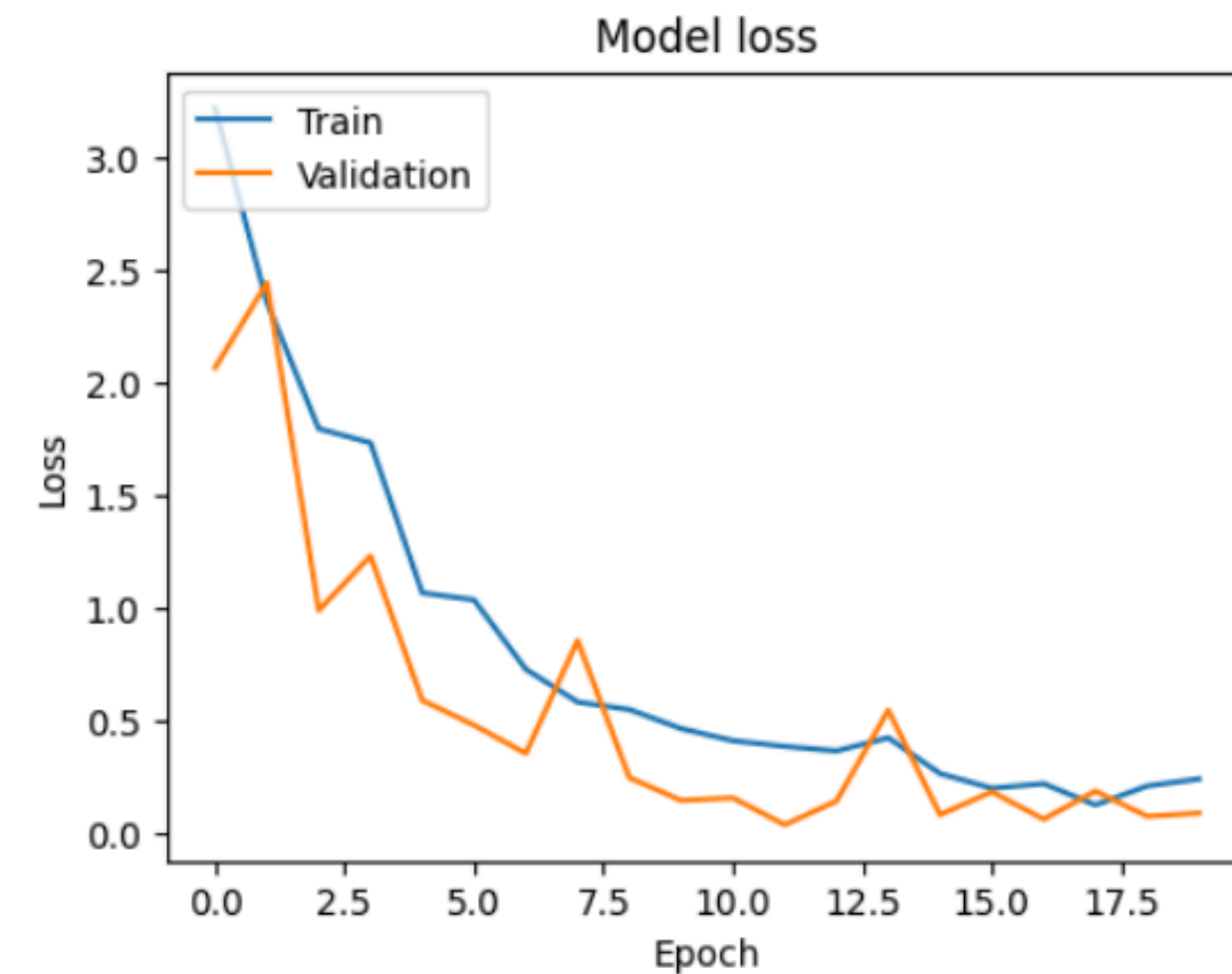
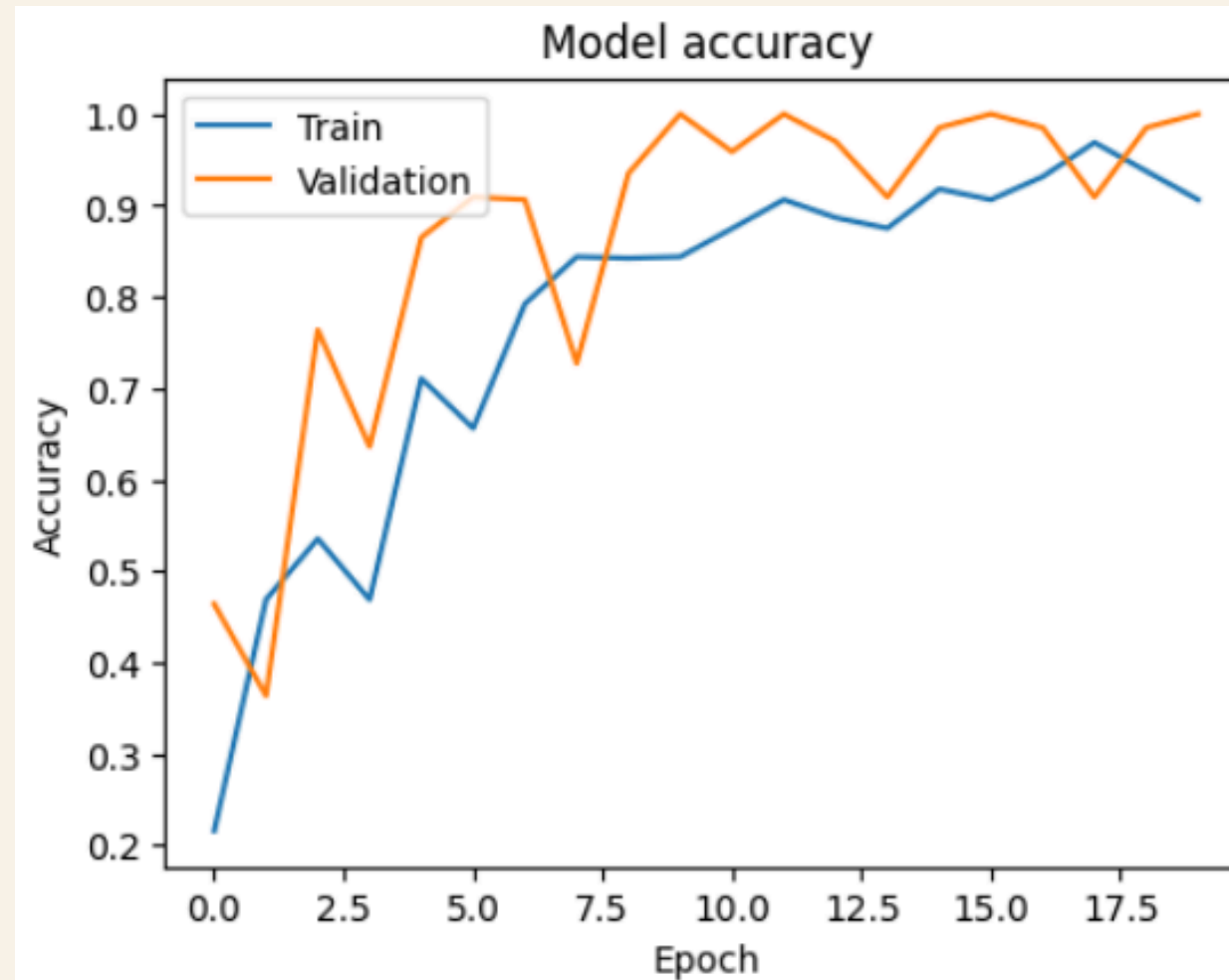
```
Epoch 10/10  
105/105 ————— 41s 380ms/step - accuracy: 0.8805 - loss: 0.3889 - val_accuracy: 0.9519 - val_loss: 0.1961
```

small dataset

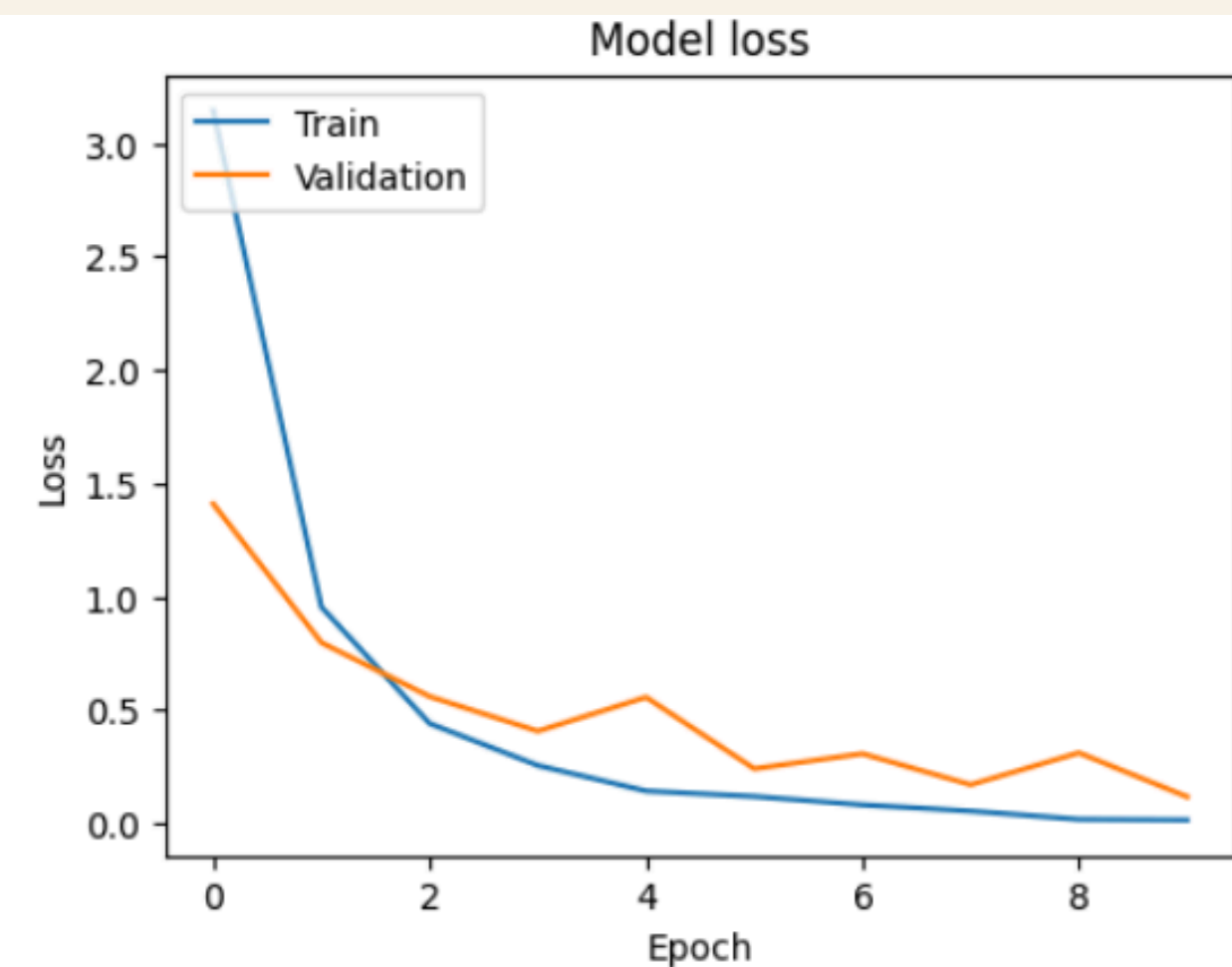
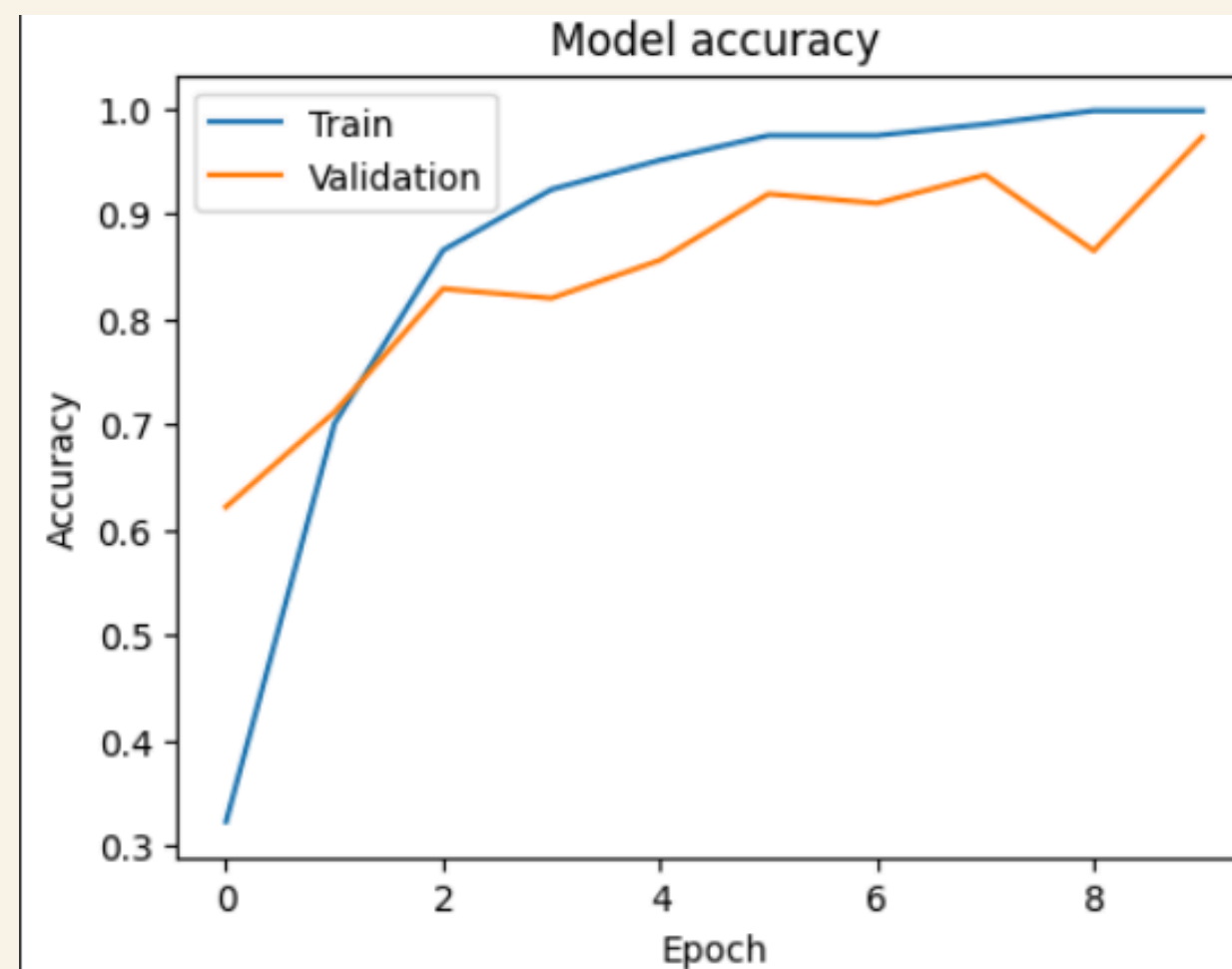
```
Epoch 10/10  
15/15 ————— 79s 5s/step - accuracy: 0.9987 - loss: 0.0166 - val_accuracy: 0.9730 - val_loss: 0.1175
```

# Results

Large dataset



small dataset



# Challenges

1 - MongoDB

2 - Big Data

3- Deadline



# features work

1- Implement real-time traffic sign detection

2-Enhance the model to detect and Classification multiple signs

thank!