Signs traffic Classification CNN Model

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Content

Problem statement

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

Dataset

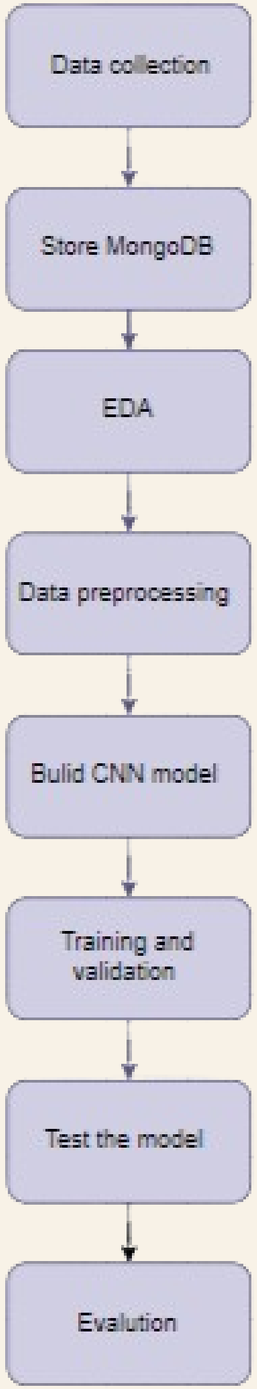
Traffic Sign Dataset - Classification

traffic Sign Data:
1- DATA
2- TEST

labels.csv

Methodology

CNN Model



Results

Large datset

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

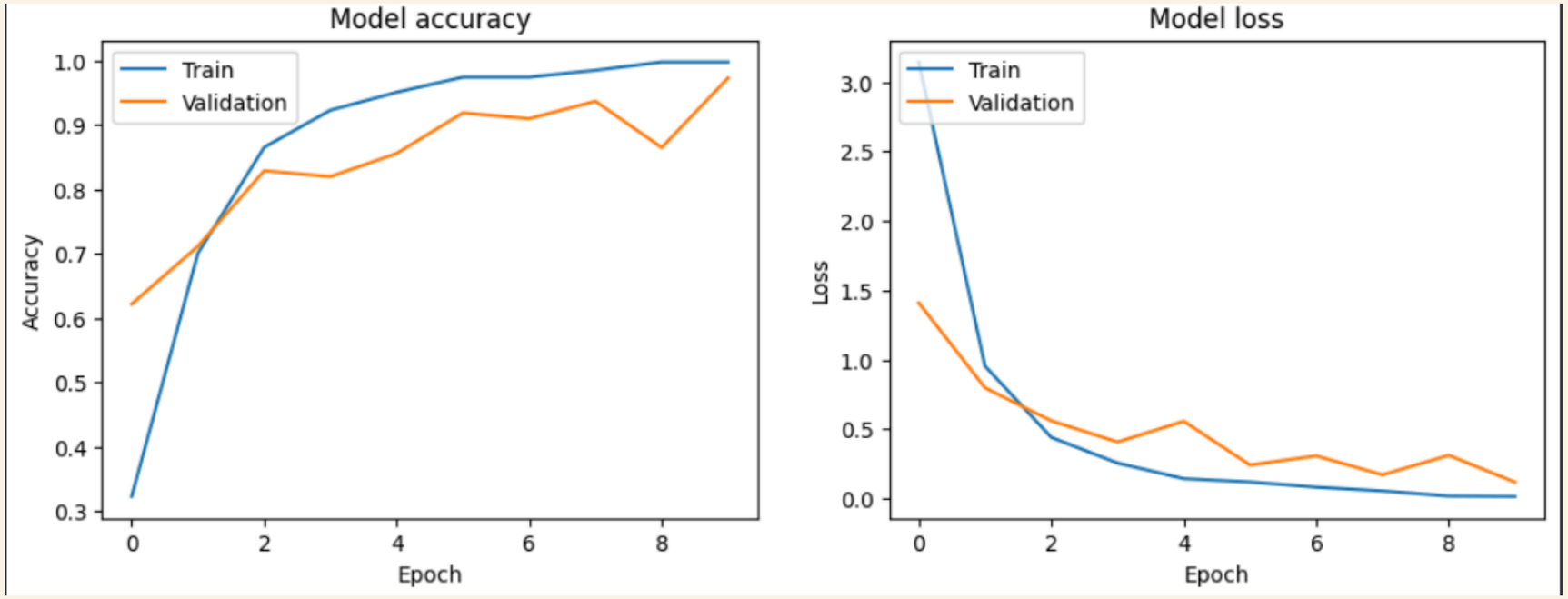
small datset

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

Results

Large datset

small datset



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 you!