



Car Accident Alert System

Deep learning project

Real time car accident alert system through live CCTV cameras

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Overview

As we know the frequency of road accidents has exponentially increased, Road accidents are a serious issue all over the world. An indicator of survival rates after detecting accidents is the time between the occurrence of accidents and the advent of medical care to the victim, As a solution to these problems we are providing a model to detect an accident as soon as it occurs and send an alert to the emergency services.



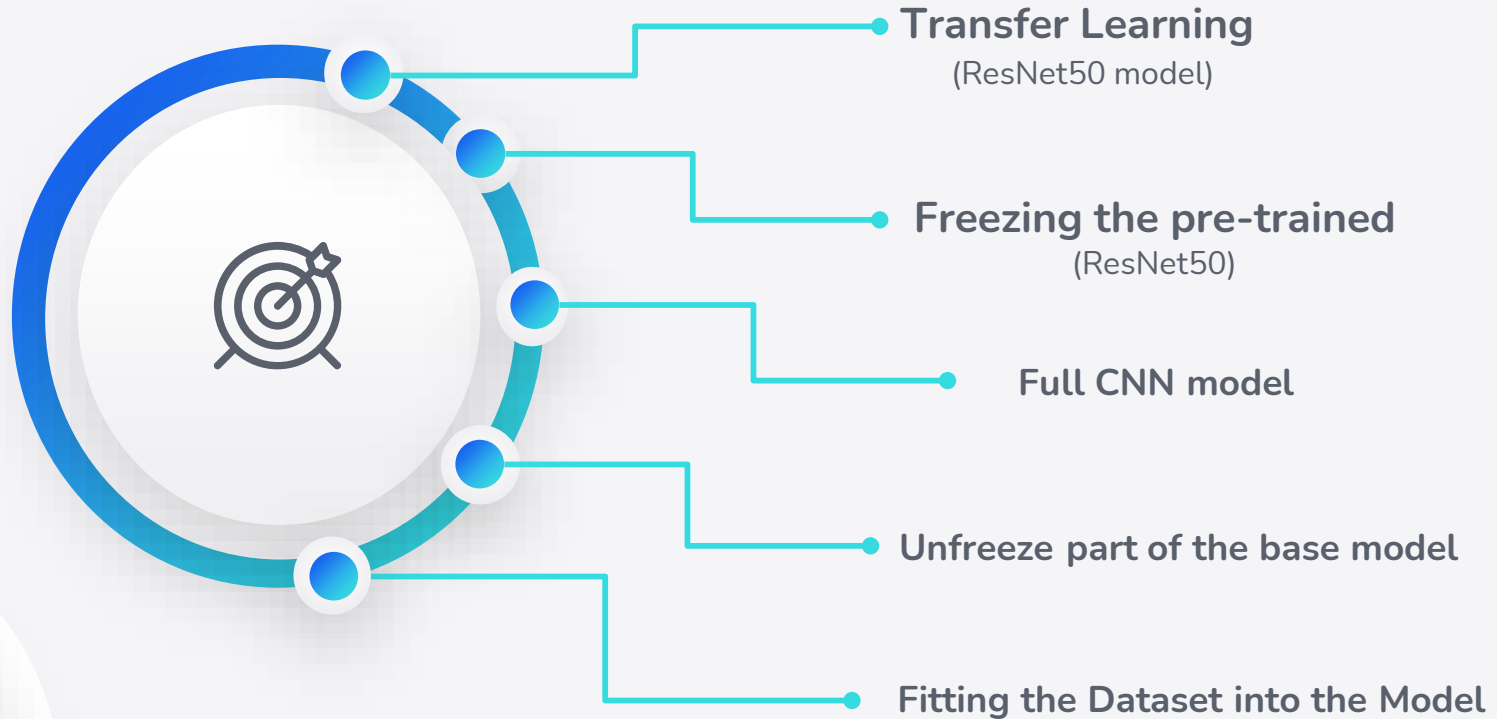
Data Description

The dataset has been collected from **kaggle**.

It's a **CCTV** images was labelled as

Accident and **Non-Accident**.

Neural Networks



Experiments

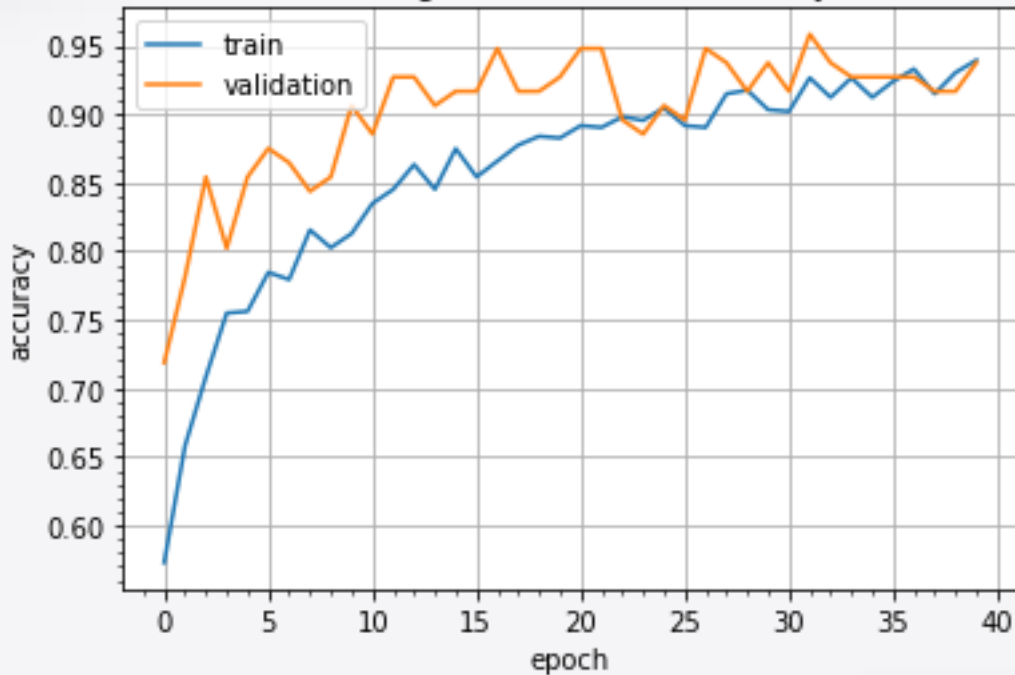


Accuracy	SoftMax	Sigmoid
Validation	93%	95%
Test	90%	93%

epochs=40

Accuracy Chart

Training and validation accuracy



Training

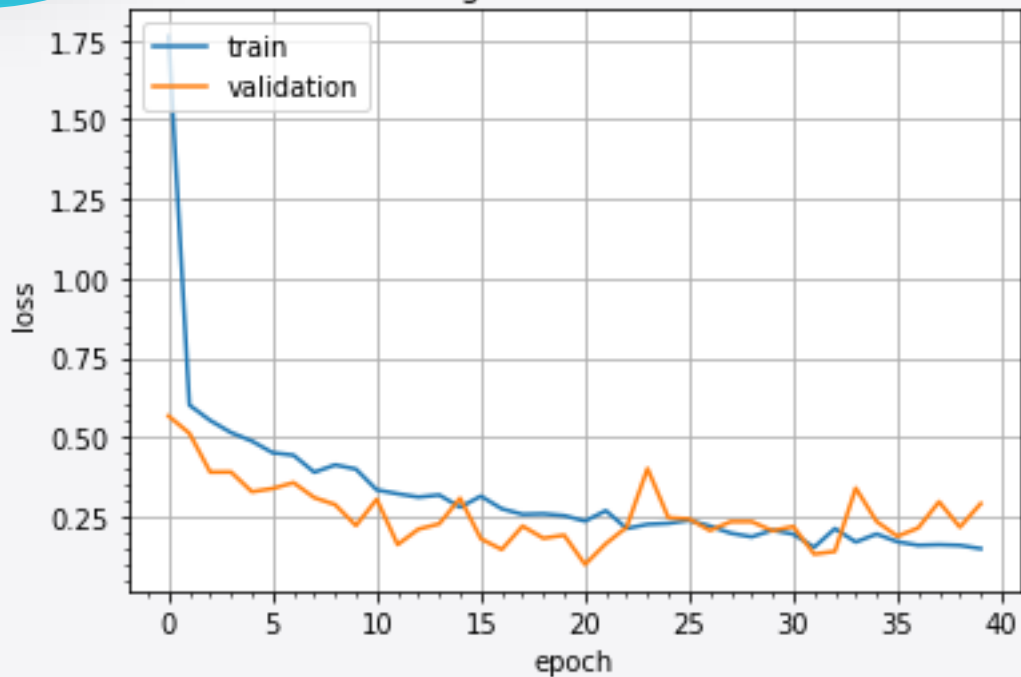
93%

Validation

95%

Loss Chart

Training and validation loss



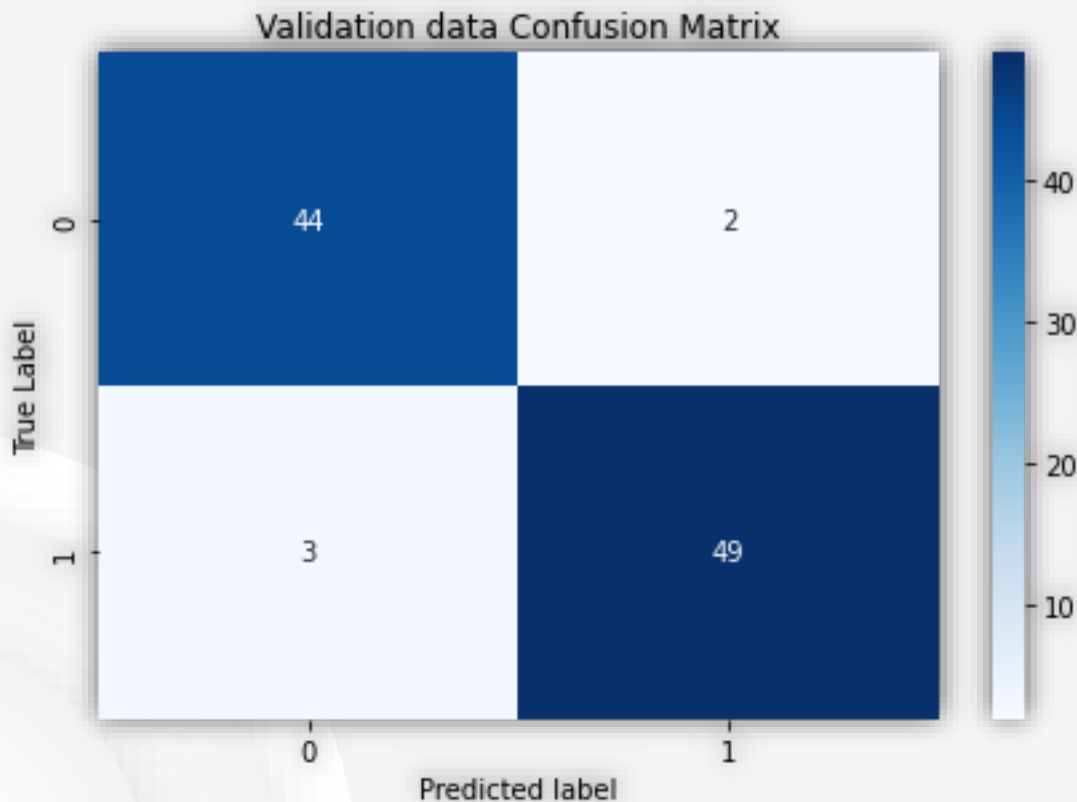
Training

14%

Validation

29%

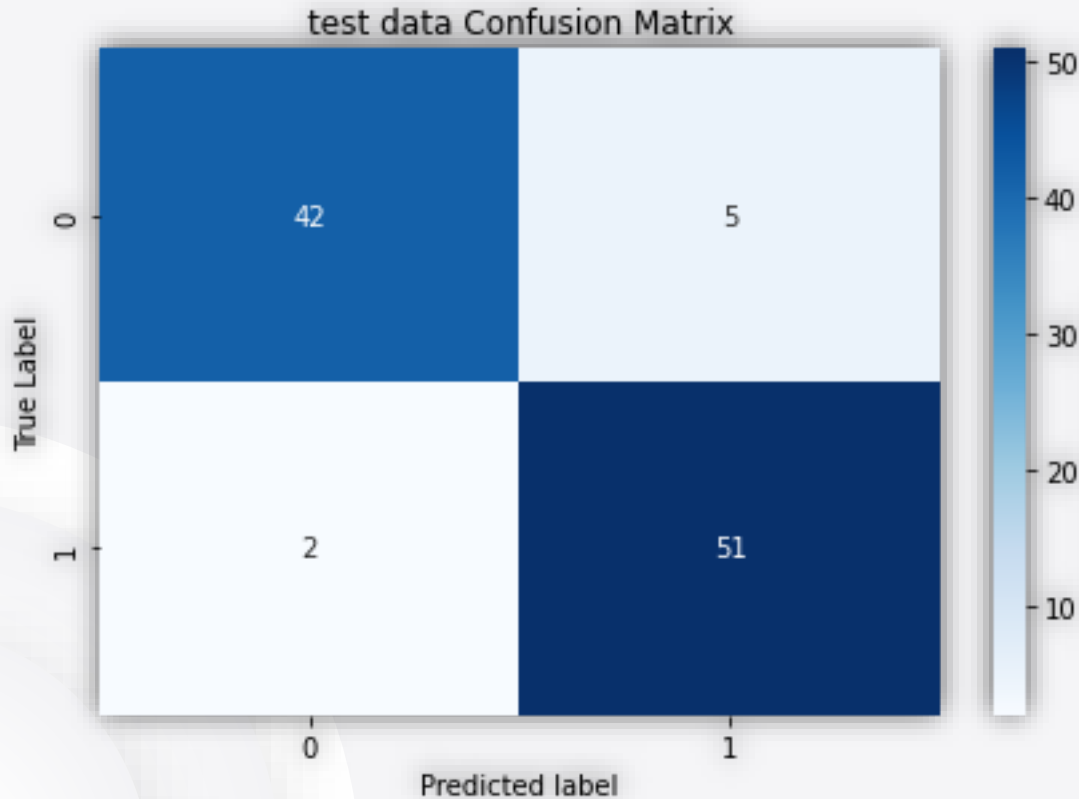
Validation Confusion Matrix



Accuracy : 95%

loss : 1%

Test Confusion Matrix



Accuracy : 93%

loss : 19%

Image Results



Model's prediction:
No Accident



Model's prediction:
No Accident

Image Results



Model's prediction:
Accident



Model's prediction:
Accident



CAM 5

Alert System



Alert!!! Accidint



Inbox x



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to me ▾

An accident has occured in Uthman Ibn Affan Road 15/01/2022 at 03:29:00



Future Work



Increase the accuracy
by adding more data
for CCTV in Saudi
Arabia's roads



Improve the model to
Determine whether the
accident is strong or not to
call an imbalance



Thank you ..

Raghad Albarrak
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