DRIVER DROWSINESS DETECTION
MINI REPORT 3

BASU VERMA
(142002007)

under the guidance of

Dr Satyajit Das

IIT PALAKKAD

INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD
PALAKKAD - 678557, KERALA

Contents

Part. 1

CNN Model

1.0.1 CNN Model using MobileNet

Trained MobilNet model on MRL Eyedataset with input size of image as 224x224x3. All images were first resized into this and then converted into array.

Binary cross_entropy was used as the loss function and adam optimizer. Model contains 3,261,697 total parameters and out of these 32,833 trainable parameters. Model was trained for total of 40 epochs with 20% for validation. Following were recorded:-

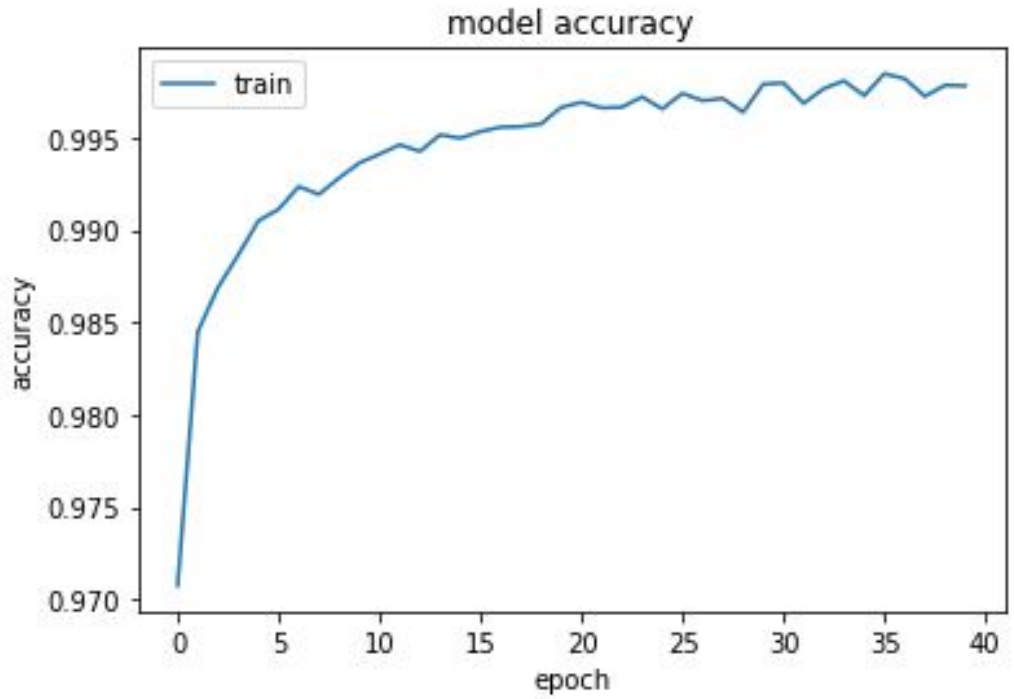

Fig. 1.1 Training curve

Model training accuracy is 99.78% and validation accuracy is 56.04% after 40 epochs but maximum validation accuracy was around 61% for 19 epochs.

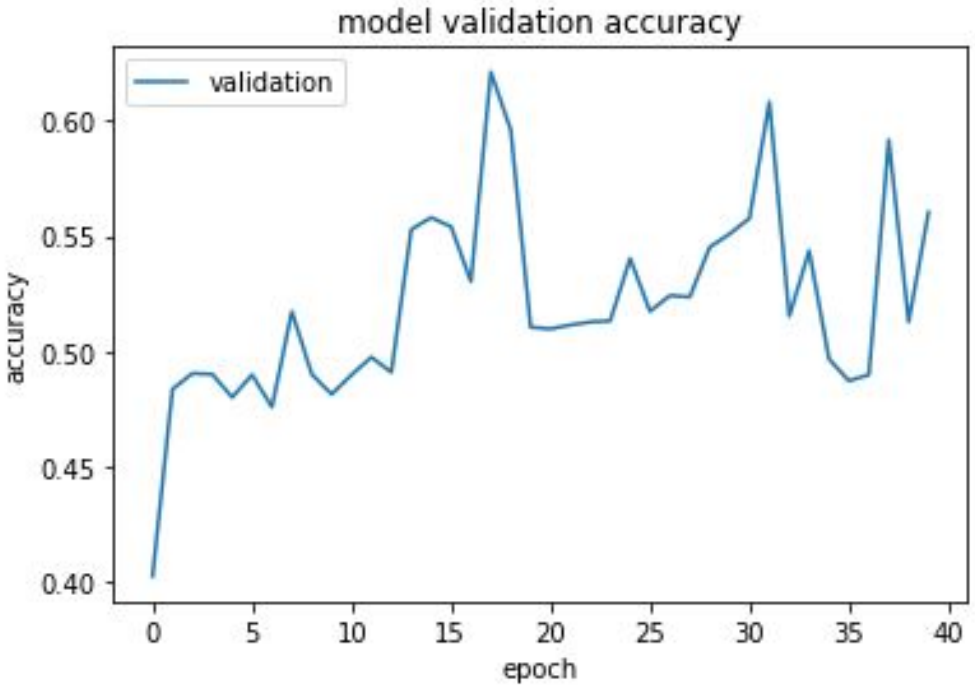

Fig. 1.2 Training curve

1.0.2 Future Work

1. Training model with Vgg16 pretrained model and with Inception Model.
2. The total number of image in dataset is around 80,000 but here I am using around 40,000 images for training and validation purpose, but still the training of model is taking so long and memory issue is constantly arising, so working on that also.

References