



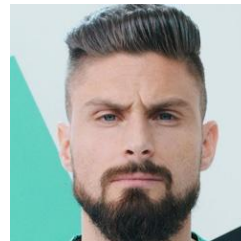
CSE40868-NeuralNetworks

Colin Lo

Image Binary Classification Model



VS





Structure

Layers

Convolution 1
ReLU
Max Pooling
Batch Normalisation 1

Convolution
ReLU
Max Pooling
Batch Normalisation 2

Convolution 3
ReLU

Convolution 4
ReLU

Convolution 5
ReLU
Max Pooling

Fully Connected 1
Dropout
ReLU
Fully Connected 2
Softmax



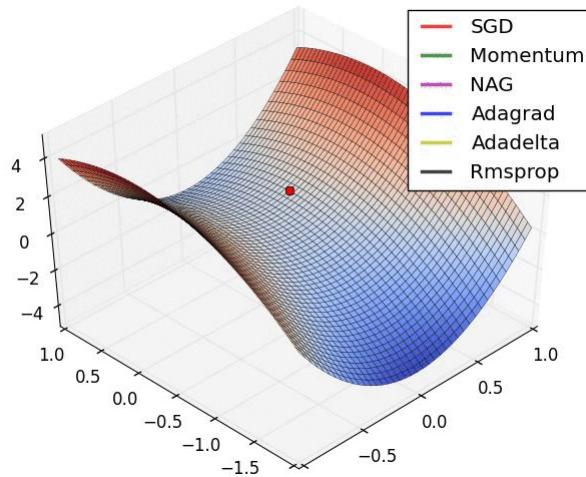
Accuracy

```
me-source : 1.0
everyone-source : 0.9411764705882353
-----
me-source : 1.0
everyone-source : 0.9629629629629629
-----
me-source : 0.9787234042553191
everyone-source : 0.9767441860465116
Accuracy on the test (unknown) data: 97.78%
```

Good at identifying my face and other people

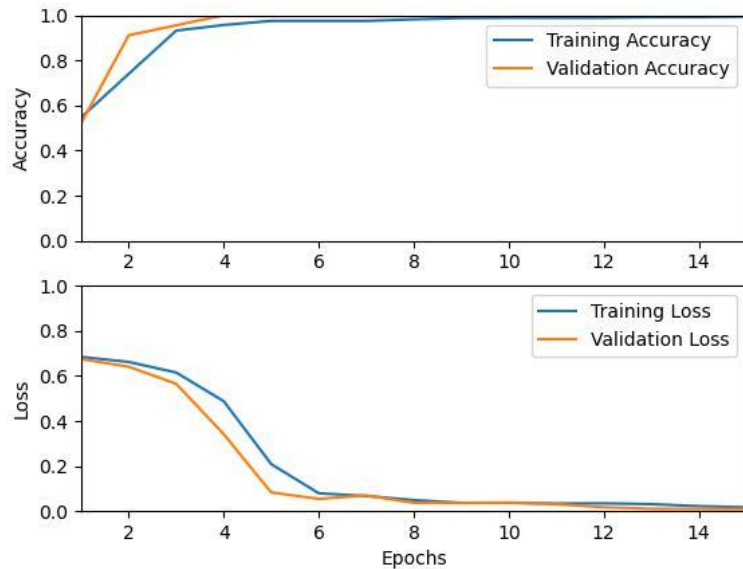
Optimizer and Loss function

SGD is used for better optimal solution



Cross Entropy Loss is used for getting better performance when the predicted output is far from the true output

Accuracy



How the model is being trained.

Number of Sample



x450



x450



Training

Batch Size	32
Epochs	15

Visualising how the model perform



Side Face Detection

Visualising how the model perform



Detection of my face with
my accessories, such as
headphones

Visualising how the model perform



Successfully identify other people even with similar face shape