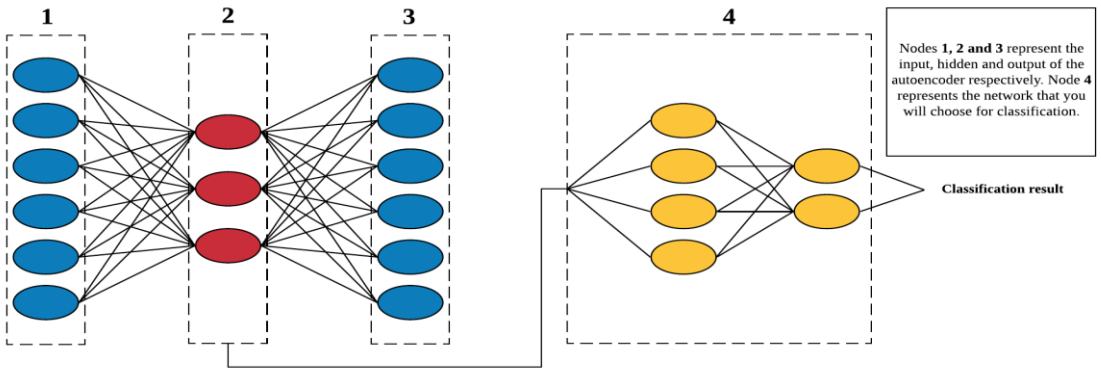
Ridge-i assignment

Supervised and unsupervised training

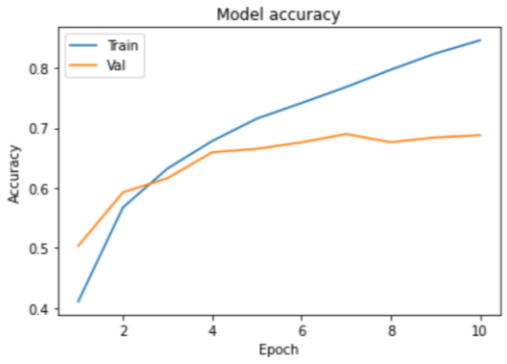
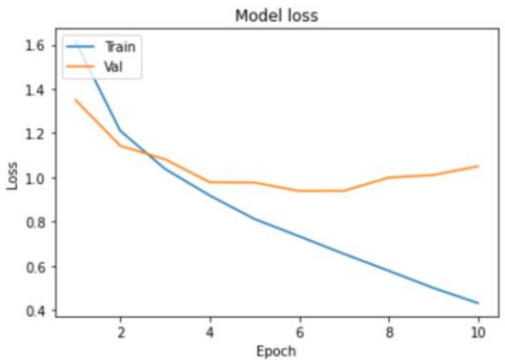
Basic Architecture



Data = Cifar 10 datasets

Consisted: 50,000 training and 10,000 testing. Because I was told to use specific label only 50% training, so to avoid the imbalance data. I decided to use 50% 50,000 training set data so it is become 25,000

Environment= Anaconda, with Jupyter notebook, I applied tensorflow keras dataset

No	Model fitting	Training Validation accuracy	Training Validation Loss
1.	Batch size = 32 Epoch =10 Verbose=1		

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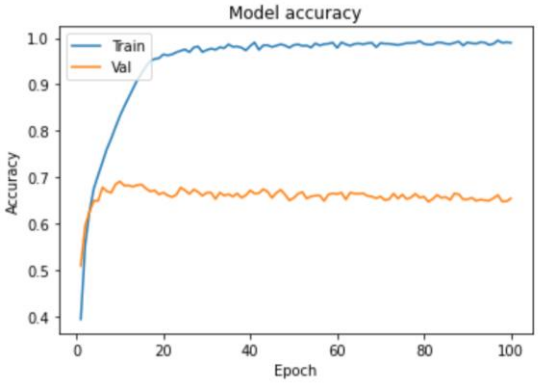
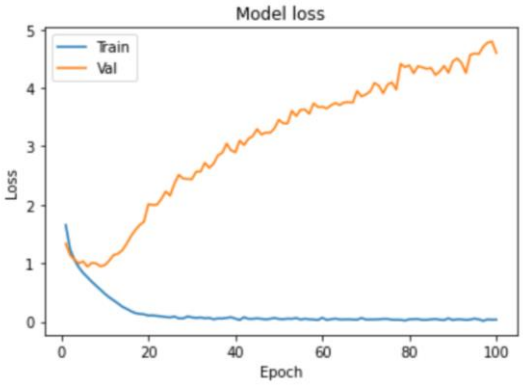
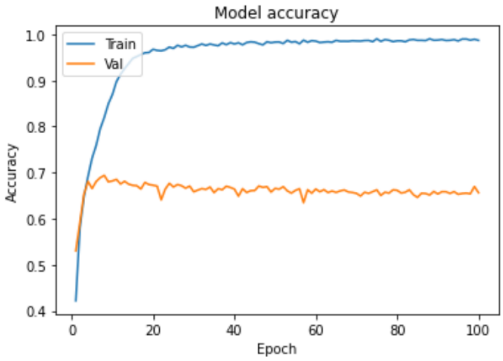
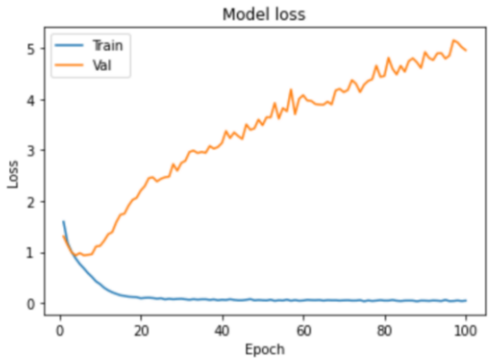
2. Batch size = 64
   Epoch =100
   Verbose=1



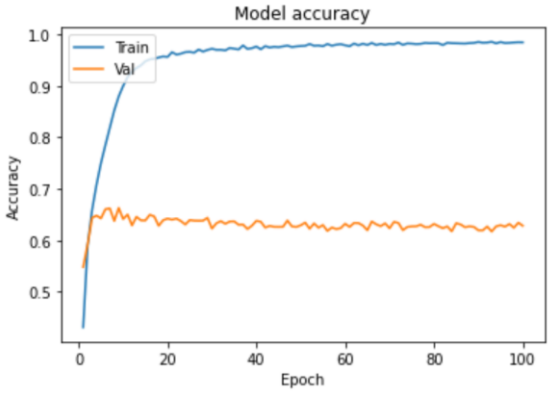


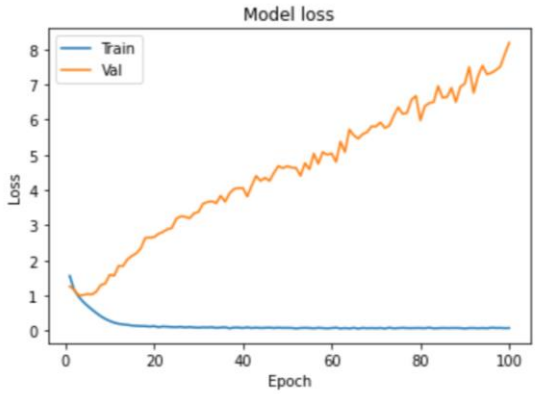
3. Batch size = 32
   Epoch =100
   Verbose=1





4. Batch size = 10
   Epoch =100
   Verbose=1





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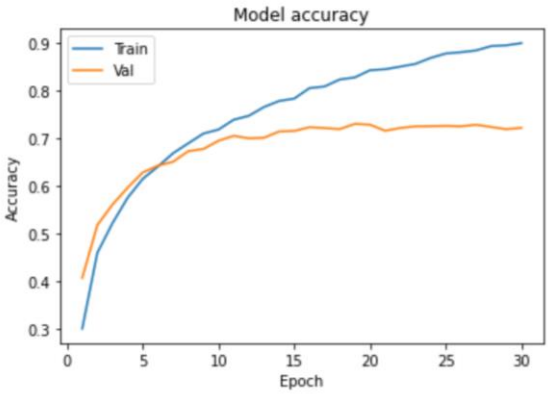
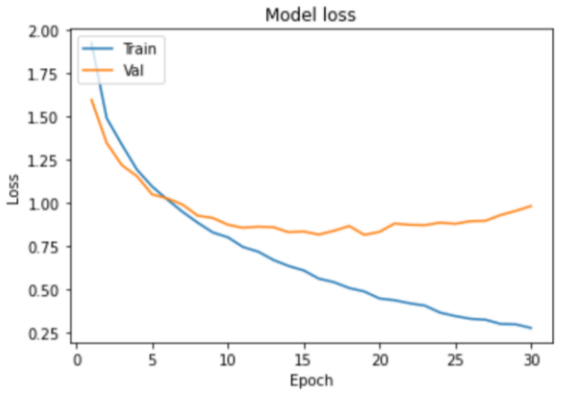
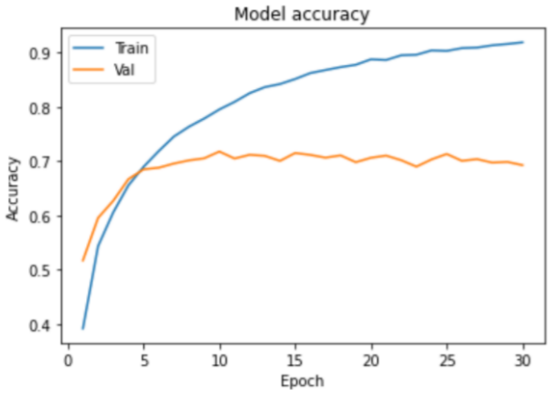
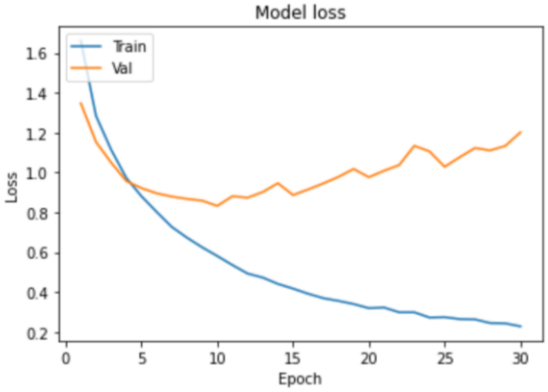
5. Batch size = 256
   Epoch = 30
   Verbose=1



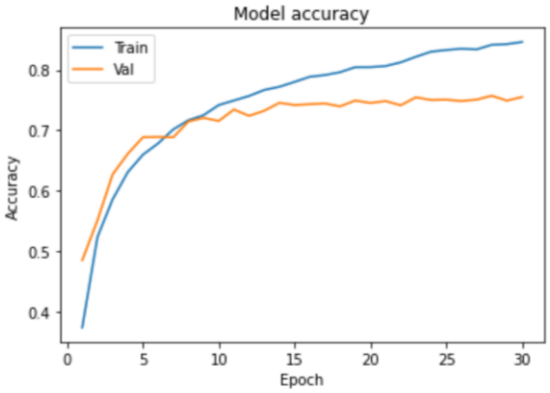


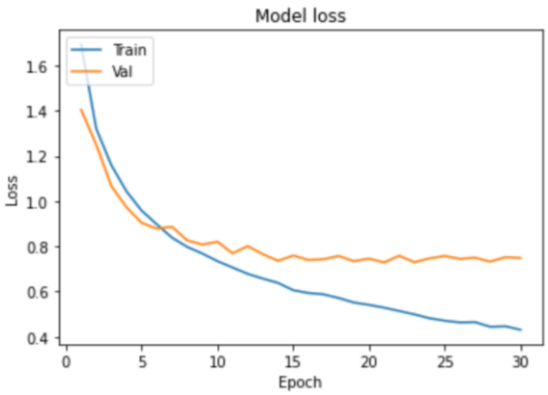
6. Batch size =32
   Epoch = 30
   Verbose=1





7 Batch size =32
   Epoch = 30
   Verbose=1
   Filtering 96,96,192





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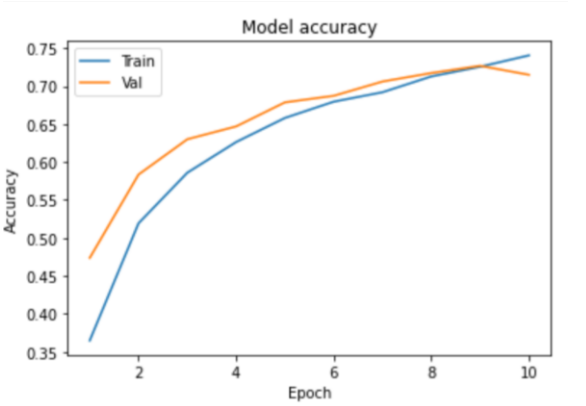
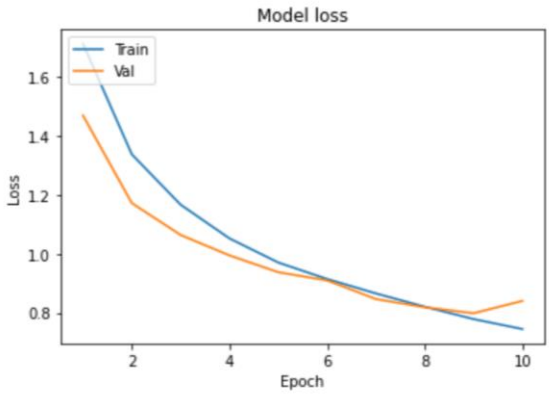
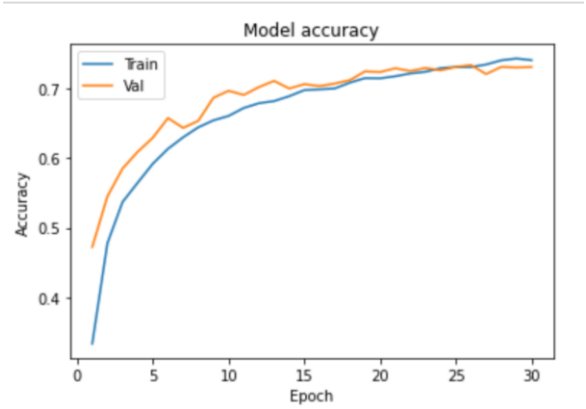
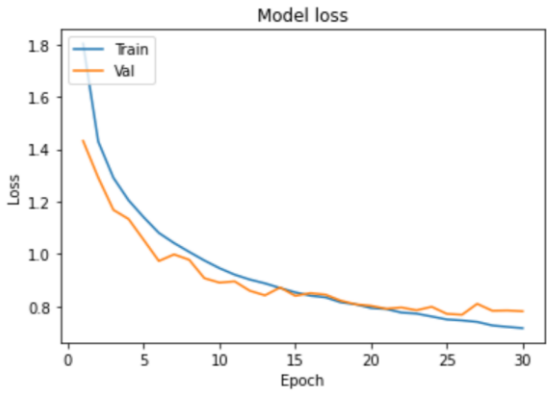
8. Batch size =32
   Epoch = 10
   Verbose=1
   Filtering 96,96,192



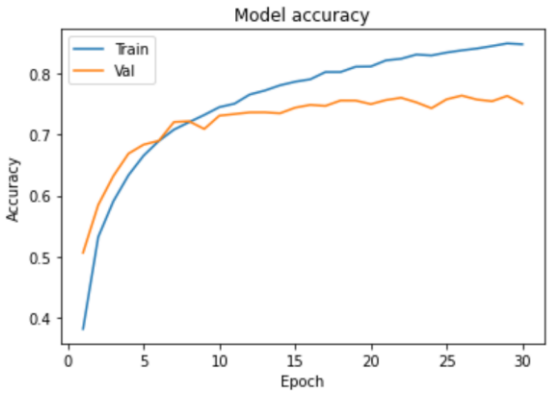


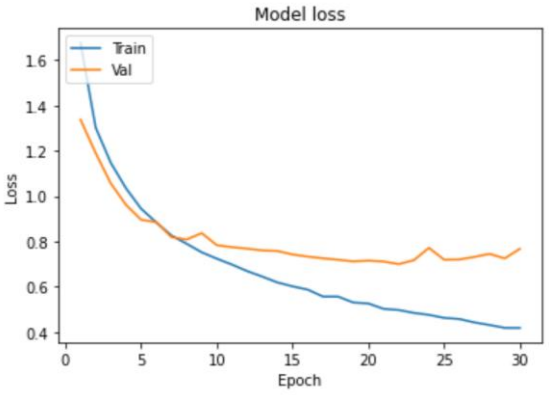
9. Batch size =32
   Epoch = 30
   Verbose=1
   Filtering 64,32,64





10. Batch size =32
    Epoch = 30
    Verbose=1
    Filtering 64,92,192





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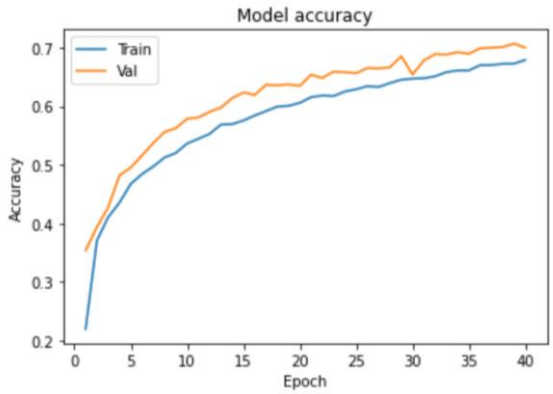
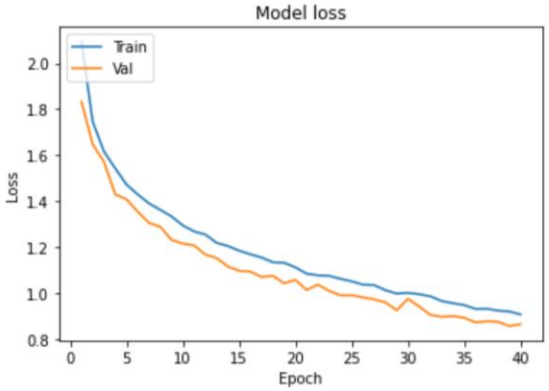
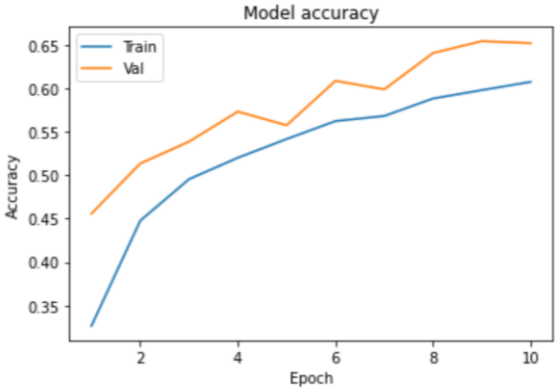
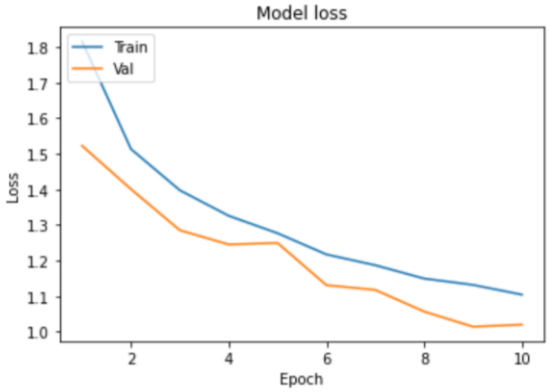
11. Batch size =502
Epoch = 40
Verbose=1
Filtering 64,92,192



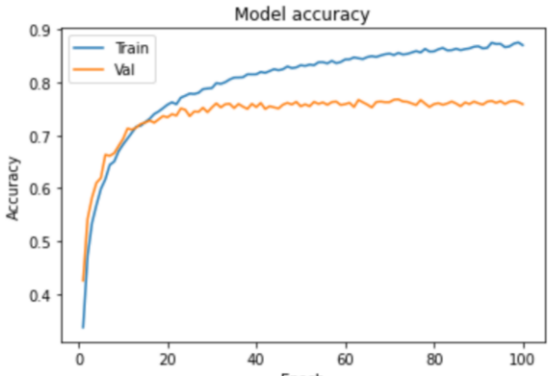


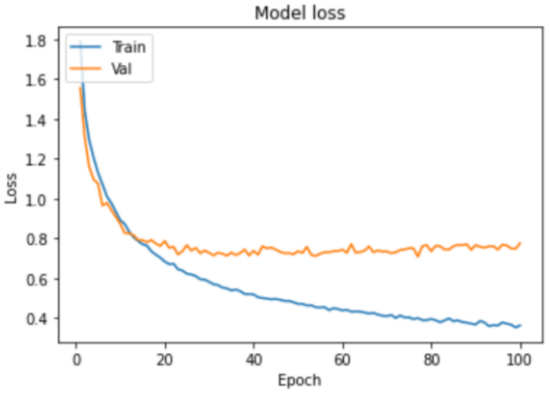
12 Epoch = 10
Verbose=1
Filtering 64,32,64,
dense unit 128





13 Batch size =64
Epoch = 100
Verbose=1
Filtering 64, 64, 64 dense 128





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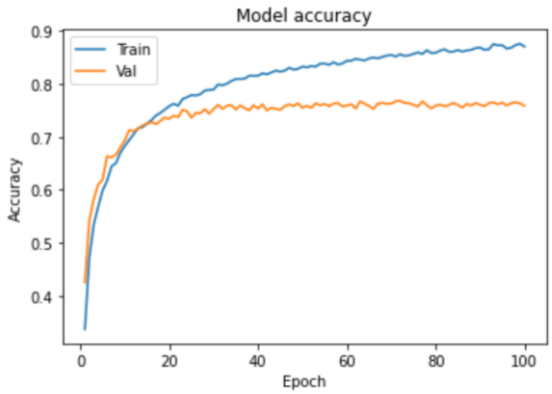
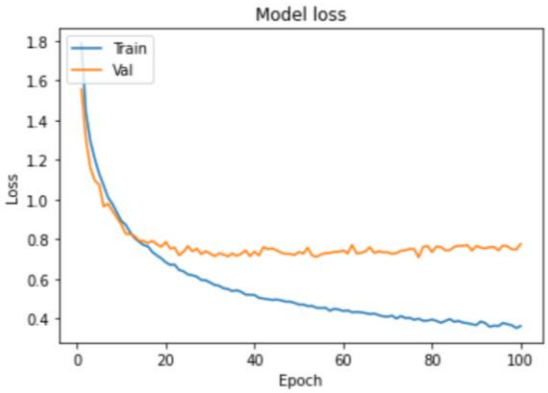
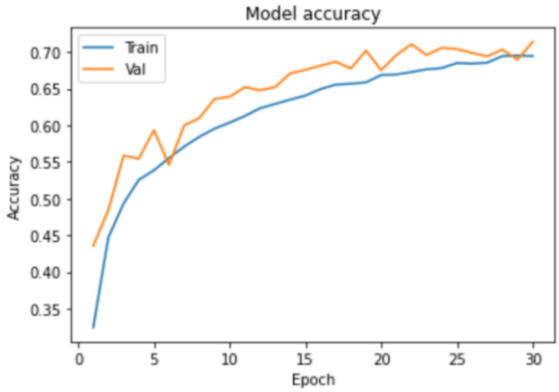
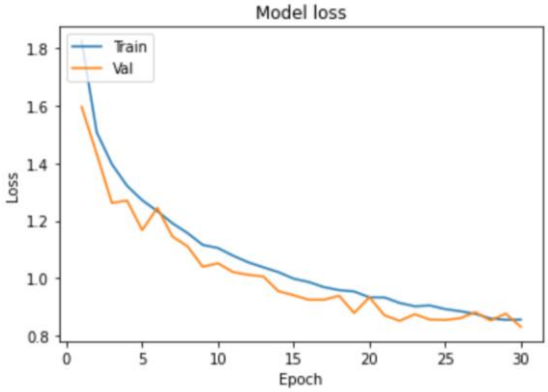
14 Batch size =64
Epoch = 100
Verbose=1
Filtering 64, 64, 64
dense 128



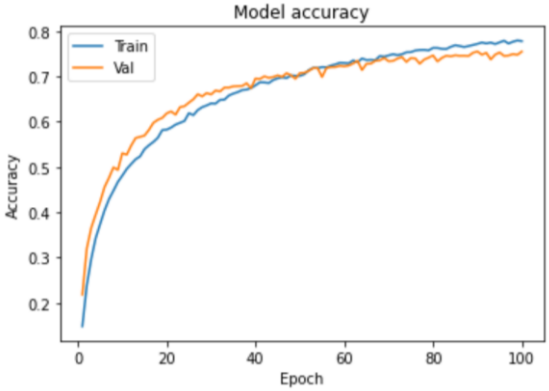


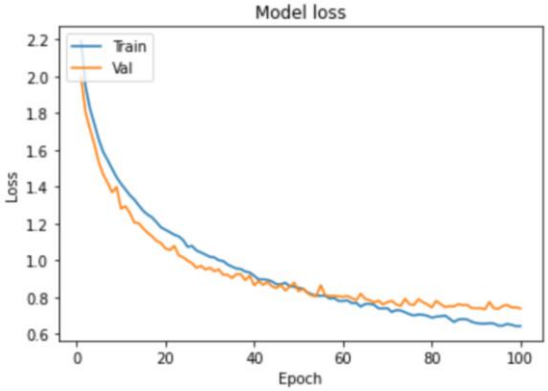
15 Epoch = 30
Verbose=1
Filtering 64, 32, 64
dense 128





16 Batch size =512
Epoch = 100
Verbose=1
Filtering 64, 32, 64, 64, 64 dense 32





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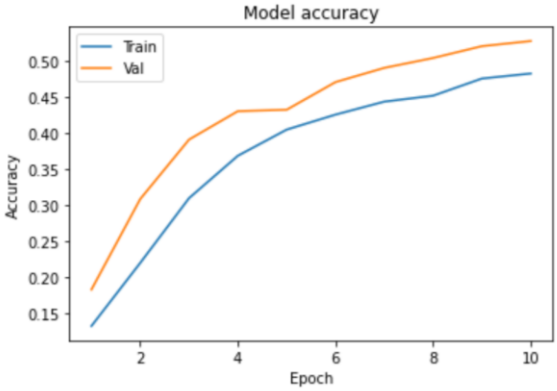
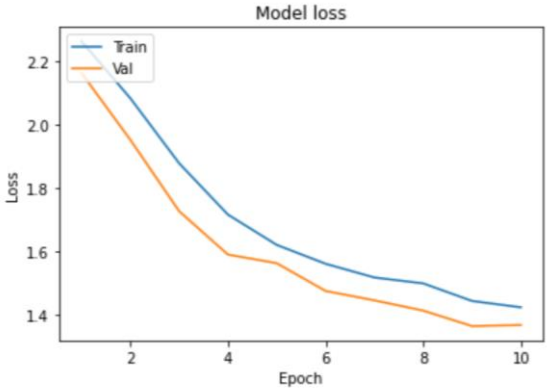
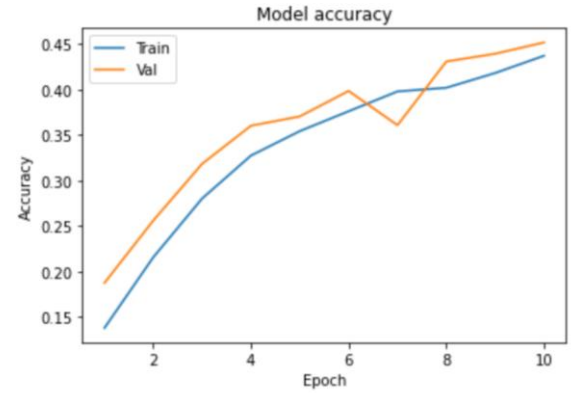
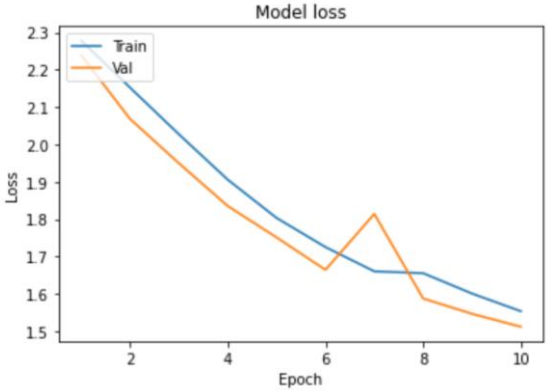
17 Batch size =1024
Epoch = 10
Verbose=1
Filtering 64, 32, 64, dense 32



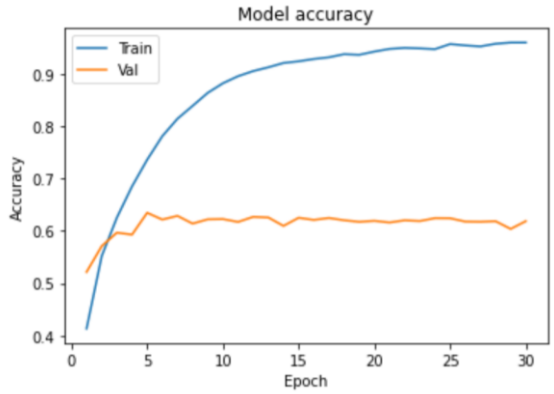


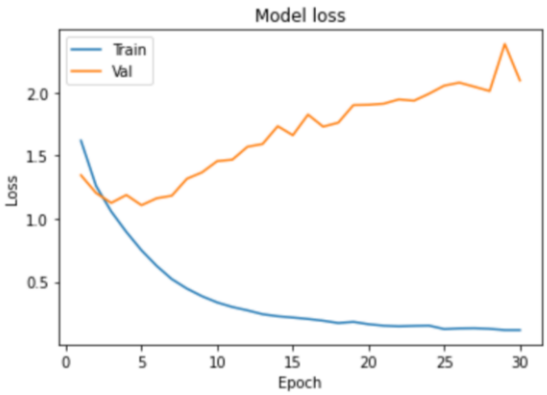
18 Batch size =2048
Epoch = 10
Verbose=1
Filtering 64, 32, 64, dense 32





19 Batch size =32
Epoch = 30
Verbose=1
Filtering 64, 32, 64, dense 64, no max pooling in this case





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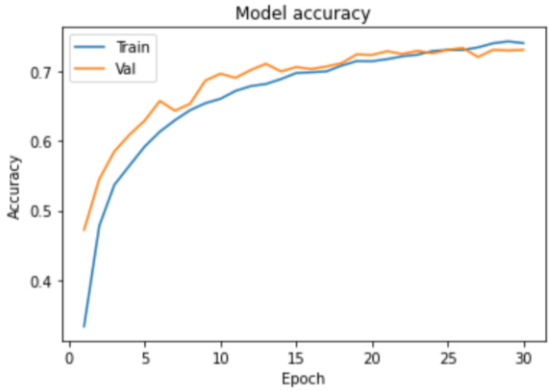
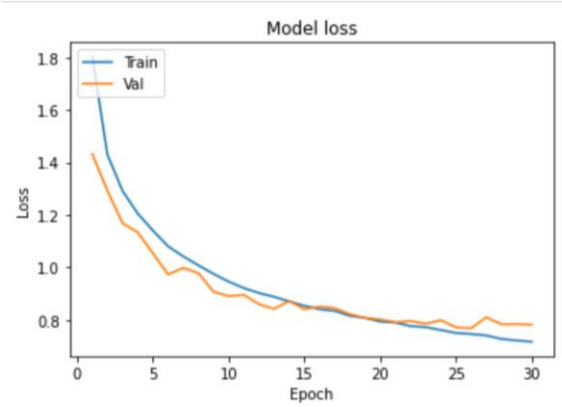
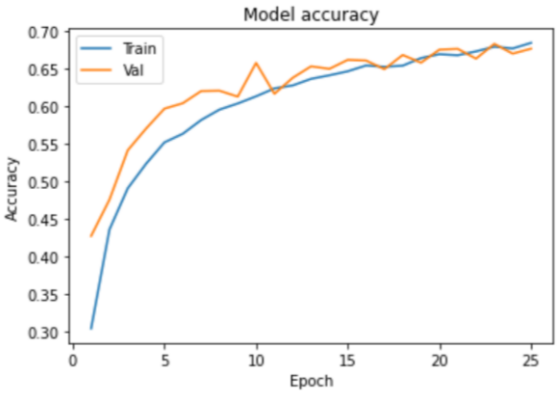
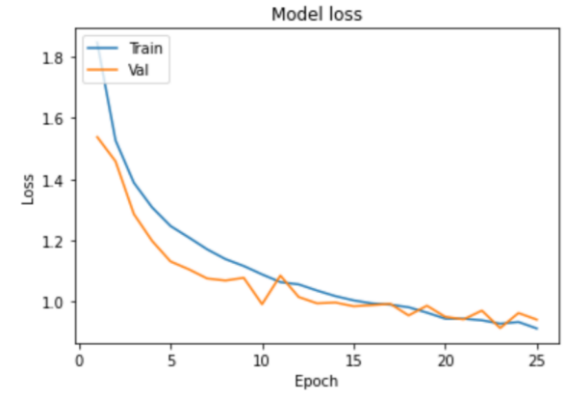
20 Batch size =32
Epoch = 30
Verbose=1
Filtering 64, 32, 64, dense 64



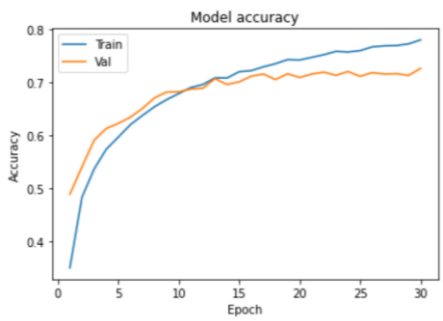


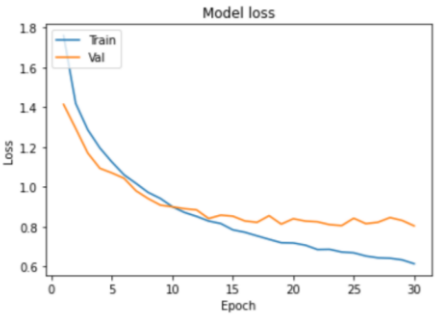
21 Batch size =10
Epoch = 25
Verbose=1
Filtering 64, 32, 64,,64,64 dense 32





22 Batch size =32
Epoch =30
Verbose=1
Filtering 64, 32, 64, dense 64





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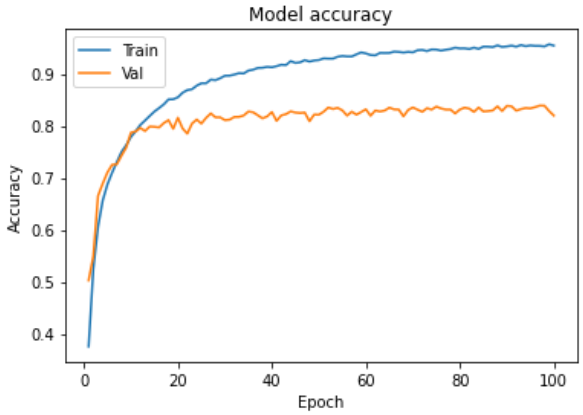
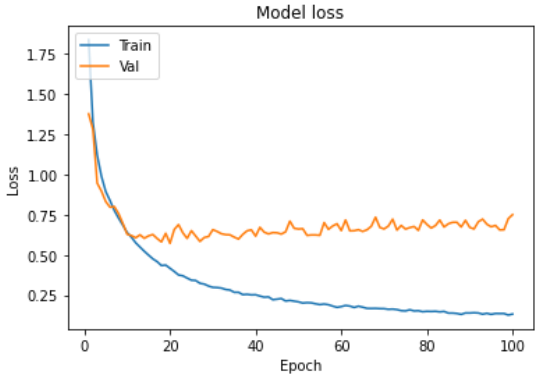
23 Batch normalization





Memory error tf.concat