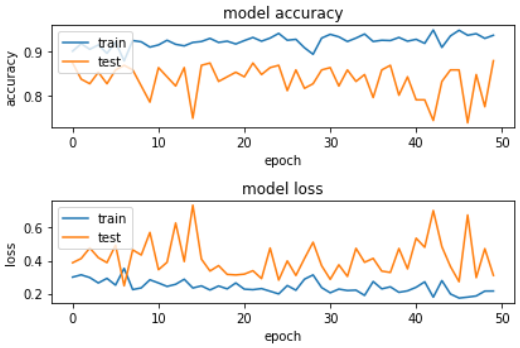
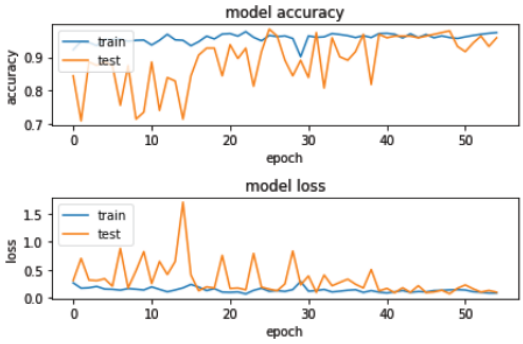
Applied CNN on NEU Dataset

Parameter Constant:

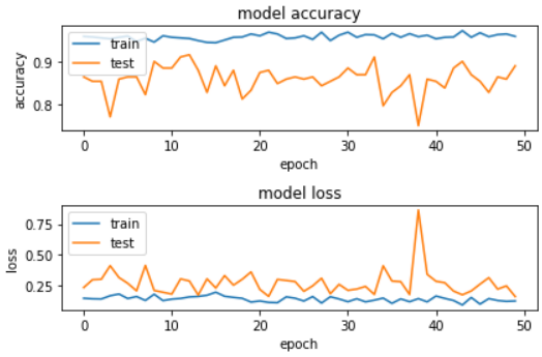
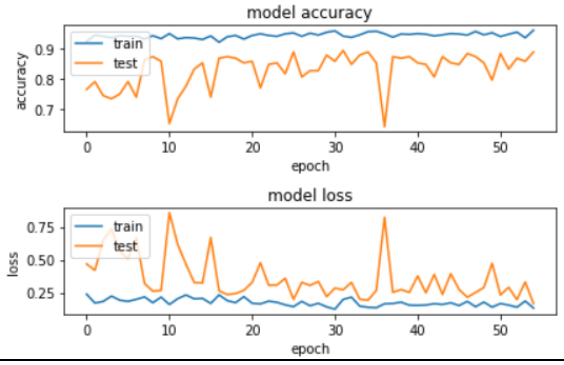
1. **No. of splitting images:** 236x32x32
2. **Batch size:** 32
3. **Data Augmentation:** rotation range=180, width_shift_range=0.2 and height_shift_range=0.2
4. **Model Parameters:** 2,05,46,470
5. **Kernel size:** 3x3
6. **Learning Rate:** 0.001
7. **Architecture:** "4 convolution layer 2 max pooling layer 3 dropout layer 2 dense layer 1 flatten layer activation = Relu and sigmoid (output)"
8. **Optimizer:** Adam
9. **Train and validation generator batch size:** 16 and 16 images respectively

Parameter Tunned:

	Case 1	Case 2
Epochs	**50**	**55**
Accuracy	**94.27%**	**96.87%**
		

Parameter Constant:

1. **No. of splitting images:** 236x32x32
2. **Batch size:** 32
3. **Data Augmentation:** rotation range=180, width_shift_range=0.2 and height_shift_range=0.2
4. **Model Parameters:** 2,05,46,470
5. **Kernel size:** 3x3
6. **Learning Rate:** 0.005
7. **Architecture:** "4 convolution layer 2 max pooling layer 3 dropout layer 2 dense layer 1 flatten layer activation = Relu and sigmoid (output)"
8. **Optimizer:** Adam
9. **Train and validation generator batch size:** 16 and 16 images respectively

	Case 1	Case 2
Epochs	**50**	**55**
Accuracy	**96.35%**	**94.79%**
		

Parameter Constant:

1. **No. of splitting images:** 236x32x32
2. **Batch size:** 32
3. **Data Augmentation:** rotation range=180, width_shift_range=0.2 and height_shift_range=0.2
4. **Epochs:** 55
5. **Kernel size:** 3x3
6. **Learning Rate:** 0.003
7. **Optimizer:** RMSProp
8. **Train and validation generator batch size:** 16 and 16 images respectively

	Case 1	Case 2
Architecture	**4 convolution layer 2 max pooling layer 3 dropout layer 2 dense layer 1 flatten layer activation = Relu and sigmoid (output)**	**6 convolution layer 2 max pooling layer 3 dropout layer 2 dense layer 1 flatten layer activation = Relu and sigmoid (output)**
#Parameters	**2,05,46,470**	**2,05,92,646**
Accuracy	**92.70%**	**85.41%**