|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Take nos.** | **No. of Conv layers** | **optimizer** | **loss function** | **Activation function (in the FC Dense Layer)** | **Size of the input image** | **Batch size** | **Used Pre-trained model** | **Steps per epoch** | **callbacks** | **Test Accuracy** |
| base\_model\_without\_bn | 6 | Adam | binary\_crossentropy | sigmoid | 128\*128 | 8 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 38% |
| base\_model\_with\_bn | 6 | Adam | binary\_crossentropy | sigmoid | 128\*128 | 8 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 60% |
| base\_model\_without\_bn | 6 | Adam | categorical\_crossentropy | softmax | 128\*128 | 8 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 62% |
| base\_model\_with\_bn | 6 | Adam | categorical\_crossentropy | softmax | 128\*128 | 8 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 36% |
| **Reconstruct the base model architecture/weights and fine tune hyper parameters** | | | | | | | | | | |
| **Take nos.** | **No. of Conv layers** | **optimizer** | **loss function** | **Activation function (in the FC Dense Layer)** | **Size of the input image** | **Batch size** | **Used Pre-trained model** | **Steps per epoch** | **callbacks** | **Test Accuracy** |
| Take1\_rmsprop\_without\_bn\_waste\_sorter\_made\_simple | 6 | rmsprop | binary\_crossentropy | sigmoid | 128\*128 | 16 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 85% but not quite good at the end (37%) |
| Take3\_rmsprop\_with\_bn\_waste\_sorter\_made\_simple | 6 | rmsprop | binary\_crossentropy | sigmoid | 128\*128 | 16 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 66% |
| Take2\_SGD\_without\_bn\_waste\_sorter\_made\_simple | 6 | optimizers.SGD(lr=1e-4, decay=1e-6, momentum=0.9) | binary\_crossentropy | sigmoid | 128\*128 | 16 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 73% |
| Take4\_SGD\_with\_bn\_waste\_sorter\_made\_simple.ipynb | 6 | optimizers.SGD(lr=1e-4, decay=1e-6, momentum=0.9) | binary\_crossentropy | sigmoid | 128\*128 | 16 | no | No. of imgs/batch size | ES & MC; mode=’max’ | 76% |