ResNet50 based model

$1 \times 5$ – Fold Cross-Validation

Learning curves
AUC-ROC curves

Fold 1

Fold 2

Fold 3

Fold 4

Fold 5
2 × 5 – Fold Cross-Validation

Learning curves
ROC curves

Fold 1

Fold 2

Fold 3

Fold 4

Fold 5
$3 \times 5$ - Fold Cross-Validation

Learning curves

Fold 1

Fold 2

Fold 3

Fold 4

Fold 5
ROC curves

Fold 1:

- Micro-average ROC curve (AUC = 0.94)
- Macro-average ROC curve (AUC = 0.93)
- ROC curve of Covid19 class (AUC = 0.93)
- ROC curve of Pneumonia class (AUC = 0.91)
- ROC curve of Healthy class (AUC = 0.96)

Fold 2:

- Micro-average ROC curve (AUC = 0.92)
- Macro-average ROC curve (AUC = 0.93)
- ROC curve of Covid19 class (AUC = 0.89)
- ROC curve of Pneumonia class (AUC = 0.97)
- ROC curve of Healthy class (AUC = 0.92)

Fold 3:

- Micro-average ROC curve (AUC = 0.90)
- Macro-average ROC curve (AUC = 0.90)
- ROC curve of Covid19 class (AUC = 0.89)
- ROC curve of Pneumonia class (AUC = 0.94)
- ROC curve of Healthy class (AUC = 0.88)

Fold 4:

- Micro-average ROC curve (AUC = 0.87)
- Macro-average ROC curve (AUC = 0.88)
- ROC curve of Covid19 class (AUC = 0.82)
- ROC curve of Pneumonia class (AUC = 0.89)
- ROC curve of Healthy class (AUC = 0.92)

Fold 5:

- Micro-average ROC curve (AUC = 0.89)
- Macro-average ROC curve (AUC = 0.89)
- ROC curve of Covid19 class (AUC = 0.89)
- ROC curve of Pneumonia class (AUC = 0.84)
- ROC curve of Healthy class (AUC = 0.91)
$4 \times 5$ – Fold Cross-Validation

Learning curves
Confusion matrices

Fold 1

Fold 2

Fold 3

Fold 4

Fold 5

ROC curves
5 × 5 – Fold Cross-Validation

Learning curves

Fold1
Training Loss and Accuracy on COVID-19 Dataset

Fold2
Training Loss and Accuracy on COVID-19 Dataset

Fold3
Training Loss and Accuracy on COVID-19 Dataset

Fold4
Training Loss and Accuracy on COVID-19 Dataset

Fold5
Training Loss and Accuracy on COVID-19 Dataset
Confusion matrices

**Fold 1**

- Covid: 210, Pneumonia: 6, Healthy: 55
- Covid: 21, Pneumonia: 123, Healthy: 23
- Covid: 0, Pneumonia: 7, Healthy: 305

**Fold 2**

- Covid: 170, Pneumonia: 68, Healthy: 29
- Covid: 4, Pneumonia: 128, Healthy: 0
- Covid: 39, Pneumonia: 0, Healthy: 225

**Fold 3**

- Covid: 181, Pneumonia: 59, Healthy: 26
- Covid: 5, Pneumonia: 106, Healthy: 23
- Covid: 33, Pneumonia: 3, Healthy: 218

**Fold 4**

- Covid: 197, Pneumonia: 17, Healthy: 37
- Covid: 22, Pneumonia: 85, Healthy: 29
- Covid: 30, Pneumonia: 15, Healthy: 170

**Fold 5**

- Covid: 121, Pneumonia: 32, Healthy: 75
- Covid: 4, Pneumonia: 137, Healthy: 21
- Covid: 27, Pneumonia: 17, Healthy: 223