

# **DATA AUGMENTATION ENHANCED AGE-INVARIANT FACE RECOGNITION SYSTEM EXPERIMENTAL RESULTS**

## **Appendix A to Appendix I**

## Appendix A: EXPERIMENTAL RESULTS OF INCEPTION-RESNET-V2-D1

**INCEPTION-RESNET-DATASET-1 (MODEL-7)**

| CLASS | TP | FP | FN | TN  | ACC        | FMR/FPR    | FNMR/FNR    | TPR      | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|------------|------------|-------------|----------|----------|----------|----------|-------------|
| 1     | 1  | 3  | 14 | 290 | 0.94480519 | 0.01023891 | 0.933333333 | 0.066667 | 0.989761 | 0.25     | 0.953947 | 0.105263158 |
| 2     | 1  | 3  | 9  | 295 | 0.96103896 | 0.01006711 | 0.9         | 0.1      | 0.989933 | 0.25     | 0.970395 | 0.142857143 |
| 3     | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 4     | 0  | 4  | 5  | 299 | 0.97077922 | 0.01320132 | 1           | 0        | 0.986799 | 0        | 0.983553 | $\infty$    |
| 5     | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 6     | 0  | 4  | 5  | 299 | 0.97077922 | 0.01320132 | 1           | 0        | 0.986799 | 0        | 0.983553 | $\infty$    |
| 7     | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 8     | 0  | 4  | 3  | 301 | 0.97727273 | 0.01311475 | 1           | 0        | 0.986885 | 0        | 0.990132 | $\infty$    |
| 9     | 1  | 2  | 3  | 302 | 0.98376623 | 0.00657895 | 0.75        | 0.25     | 0.993421 | 0.333333 | 0.990164 | 0.285714286 |
| 10    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 11    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 12    | 0  | 4  | 7  | 297 | 0.96428571 | 0.01328904 | 1           | 0        | 0.986711 | 0        | 0.976974 | $\infty$    |
| 13    | 0  | 4  | 3  | 301 | 0.97727273 | 0.01311475 | 1           | 0        | 0.986885 | 0        | 0.990132 | $\infty$    |
| 14    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 15    | 0  | 4  | 4  | 300 | 0.97402597 | 0.01315789 | 1           | 0        | 0.986842 | 0        | 0.986842 | $\infty$    |
| 16    | 2  | 2  | 8  | 296 | 0.96753247 | 0.00671141 | 0.8         | 0.2      | 0.993289 | 0.5      | 0.973684 | 0.285714286 |
| 17    | 0  | 4  | 4  | 300 | 0.97402597 | 0.01315789 | 1           | 0        | 0.986842 | 0        | 0.986842 | $\infty$    |
| 18    | 0  | 2  | 0  | 306 | 0.99350649 | 0.00649351 | $\infty$    | $\infty$ | 0.993506 | 0        | 1        | $\infty$    |
| 19    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 20    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 21    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 22    | 0  | 3  | 1  | 304 | 0.98701299 | 0.00977199 | 1           | 0        | 0.990228 | 0        | 0.996721 | $\infty$    |
| 23    | 0  | 3  | 1  | 304 | 0.98701299 | 0.00977199 | 1           | 0        | 0.990228 | 0        | 0.996721 | $\infty$    |
| 24    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 25    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 26    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |

# INCEPTION-RESNET-DATASET-1 (MODEL-7)

| CLASS | TP | FP | FN | TN  | ACC        | FMR/FPR    | FNMR/FNR    | TPR      | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|------------|------------|-------------|----------|----------|----------|----------|-------------|
| 27    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 28    | 0  | 4  | 3  | 301 | 0.97727273 | 0.01311475 | 1           | 0        | 0.986885 | 0        | 0.990132 | $\infty$    |
| 29    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 30    | 0  | 3  | 2  | 303 | 0.98376623 | 0.00980392 | 1           | 0        | 0.990196 | 0        | 0.993443 | $\infty$    |
| 31    | 1  | 3  | 7  | 297 | 0.96753247 | 0.01       | 0.875       | 0.125    | 0.99     | 0.25     | 0.976974 | 0.166666667 |
| 32    | 1  | 2  | 2  | 303 | 0.98701299 | 0.00655738 | 0.666666667 | 0.333333 | 0.993443 | 0.333333 | 0.993443 | 0.333333333 |
| 33    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 34    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 35    | 1  | 3  | 6  | 298 | 0.97077922 | 0.00996678 | 0.857142857 | 0.142857 | 0.990033 | 0.25     | 0.980263 | 0.181818182 |
| 36    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 37    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 38    | 0  | 4  | 2  | 302 | 0.98051948 | 0.0130719  | 1           | 0        | 0.986928 | 0        | 0.993421 | $\infty$    |
| 39    | 1  | 3  | 7  | 297 | 0.96753247 | 0.01       | 0.875       | 0.125    | 0.99     | 0.25     | 0.976974 | 0.166666667 |
| 40    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 41    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 42    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 43    | 1  | 2  | 16 | 289 | 0.94155844 | 0.00687285 | 0.941176471 | 0.058824 | 0.993127 | 0.333333 | 0.947541 | 0.1         |
| 44    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 45    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 46    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 47    | 0  | 4  | 2  | 302 | 0.98051948 | 0.0130719  | 1           | 0        | 0.986928 | 0        | 0.993421 | $\infty$    |
| 48    | 2  | 3  | 12 | 291 | 0.9512987  | 0.01020408 | 0.857142857 | 0.142857 | 0.989796 | 0.4      | 0.960396 | 0.210526316 |
| 49    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 50    | 0  | 2  | 1  | 305 | 0.99025974 | 0.00651466 | 1           | 0        | 0.993485 | 0        | 0.996732 | $\infty$    |
| 51    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 52    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 53    | 0  | 3  | 2  | 303 | 0.98376623 | 0.00980392 | 1           | 0        | 0.990196 | 0        | 0.993443 | $\infty$    |
| 54    | 0  | 4  | 2  | 302 | 0.98051948 | 0.0130719  | 1           | 0        | 0.986928 | 0        | 0.993421 | $\infty$    |
| 55    | 1  | 1  | 14 | 292 | 0.9512987  | 0.00341297 | 0.933333333 | 0.066667 | 0.996587 | 0.5      | 0.954248 | 0.117647059 |

**INCEPTION-RESNET-DATASET-1 (MODEL-7)**

| CLASS | TP | FP | FN | TN  | ACC        | FMR/FPR    | FNMR/FNR    | TPR      | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|------------|------------|-------------|----------|----------|----------|----------|-------------|
| 56    | 0  | 2  | 3  | 303 | 0.98376623 | 0.00655738 | 1           | 0        | 0.993443 | 0        | 0.990196 | $\infty$    |
| 57    | 0  | 2  | 1  | 305 | 0.99025974 | 0.00651466 | 1           | 0        | 0.993485 | 0        | 0.996732 | $\infty$    |
| 58    | 1  | 2  | 1  | 304 | 0.99025974 | 0.00653595 | 0.5         | 0.5      | 0.993464 | 0.333333 | 0.996721 | 0.4         |
| 59    | 0  | 2  | 0  | 306 | 0.99350649 | 0.00649351 | $\infty$    | $\infty$ | 0.993506 | 0        | 1        | $\infty$    |
| 60    | 1  | 3  | 5  | 299 | 0.97402597 | 0.00993377 | 0.833333333 | 0.166667 | 0.990066 | 0.25     | 0.983553 | 0.2         |
| 61    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 62    | 0  | 4  | 0  | 304 | 0.98701299 | 0.01298701 | $\infty$    | $\infty$ | 0.987013 | 0        | 1        | $\infty$    |
| 63    | 0  | 3  | 2  | 303 | 0.98376623 | 0.00980392 | 1           | 0        | 0.990196 | 0        | 0.993443 | $\infty$    |
| 64    | 0  | 2  | 0  | 306 | 0.99350649 | 0.00649351 | $\infty$    | $\infty$ | 0.993506 | 0        | 1        | $\infty$    |
| 65    | 0  | 4  | 4  | 300 | 0.97402597 | 0.01315789 | 1           | 0        | 0.986842 | 0        | 0.986842 | $\infty$    |
| 66    | 0  | 4  | 2  | 302 | 0.98051948 | 0.0130719  | 1           | 0        | 0.986928 | 0        | 0.993421 | $\infty$    |
| 67    | 0  | 2  | 0  | 306 | 0.99350649 | 0.00649351 | $\infty$    | $\infty$ | 0.993506 | 0        | 1        | $\infty$    |
| 68    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 69    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 70    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 71    | 0  | 4  | 4  | 300 | 0.97402597 | 0.01315789 | 1           | 0        | 0.986842 | 0        | 0.986842 | $\infty$    |
| 72    | 0  | 4  | 16 | 288 | 0.93506494 | 0.01369863 | 1           | 0        | 0.986301 | 0        | 0.947368 | $\infty$    |
| 73    | 1  | 4  | 5  | 298 | 0.97077922 | 0.01324503 | 0.833333333 | 0.166667 | 0.986755 | 0.2      | 0.983498 | 0.181818182 |
| 74    | 1  | 4  | 9  | 294 | 0.95779221 | 0.01342282 | 0.9         | 0.1      | 0.986577 | 0.2      | 0.970297 | 0.133333333 |
| 75    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 76    | 2  | 3  | 33 | 270 | 0.88311688 | 0.01098901 | 0.942857143 | 0.057143 | 0.989011 | 0.4      | 0.891089 | 0.1         |
| 77    | 0  | 4  | 10 | 294 | 0.95454545 | 0.01342282 | 1           | 0        | 0.986577 | 0        | 0.967105 | $\infty$    |
| 78    | 3  | 1  | 6  | 298 | 0.97727273 | 0.00334448 | 0.666666667 | 0.333333 | 0.996656 | 0.75     | 0.980263 | 0.461538462 |
| 79    | 0  | 4  | 6  | 298 | 0.96753247 | 0.01324503 | 1           | 0        | 0.986755 | 0        | 0.980263 | $\infty$    |
| 80    | 0  | 4  | 4  | 300 | 0.97402597 | 0.01315789 | 1           | 0        | 0.986842 | 0        | 0.986842 | $\infty$    |
| 81    | 0  | 3  | 0  | 305 | 0.99025974 | 0.00974026 | $\infty$    | $\infty$ | 0.99026  | 0        | 1        | $\infty$    |
| 82    | 0  | 2  | 0  | 306 | 0.99350649 | 0.00649351 | $\infty$    | $\infty$ | 0.993506 | 0        | 1        | $\infty$    |
| 83    | 3  | 2  | 4  | 299 | 0.98051948 | 0.00664452 | 0.571428571 | 0.428571 | 0.993355 | 0.6      | 0.986799 | 0.5         |
| 84    | 1  | 3  | 5  | 299 | 0.97402597 | 0.00993377 | 0.833333333 | 0.166667 | 0.990066 | 0.25     | 0.983553 | 0.2         |

**INCEPTION-RESNET-DATASET-1 (MODEL-7)**

| CLASS | TP | FP | FN | TN  | ACC        | FMR/FPR    | FNMR/FNR    | TPR       | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|------------|------------|-------------|-----------|----------|----------|----------|-------------|
| 85    | 1  | 2  | 8  | 297 | 0.96753247 | 0.00668896 | 0.888888889 | 0.1111111 | 0.993311 | 0.333333 | 0.97377  | 0.166666667 |
| 86    | 0  | 2  | 1  | 305 | 0.99025974 | 0.00651466 | 1           | 0         | 0.993485 | 0        | 0.996732 | $\infty$    |
| 87    | 0  | 3  | 2  | 303 | 0.98376623 | 0.00980392 | 1           | 0         | 0.990196 | 0        | 0.993443 | $\infty$    |
| 88    | 0  | 1  | 0  | 307 | 0.99675325 | 0.00324675 | $\infty$    | $\infty$  | 0.996753 | 0        | 1        | $\infty$    |
| 89    | 0  | 2  | 2  | 304 | 0.98701299 | 0.00653595 | 1           | 0         | 0.993464 | 0        | 0.993464 | $\infty$    |
| 90    | 0  | 1  | 0  | 307 | 0.99675325 | 0.00324675 | $\infty$    | $\infty$  | 0.996753 | 0        | 1        | $\infty$    |
| 91    | 0  | 2  | 0  | 306 | 0.99350649 | 0.00649351 | $\infty$    | $\infty$  | 0.993506 | 0        | 1        | $\infty$    |
| 92    | 0  | 3  | 1  | 304 | 0.98701299 | 0.00977199 | 1           | 0         | 0.990228 | 0        | 0.996721 | $\infty$    |
| 93    | 0  | 1  | 0  | 307 | 0.99675325 | 0.00324675 | $\infty$    | $\infty$  | 0.996753 | 0        | 1        | $\infty$    |

**Appendix B: EXPERIMENTAL RESULTS OF INCEPTION-RESNET-V2-D2****INCEPTION-RESNET-V2-DATASET-2 (MODEL-8)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR  | FNMR/FNR   | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|----------|------------|---------|---------|---------|---------|-------------|
| 1     | 5  | 9  | 2  | 919 | 0.98824 | 0.009698 | 0.28571429 | 0.71429 | 0.9903  | 0.35714 | 0.99783 | 0.476190476 |
| 2     | 6  | 8  | 21 | 900 | 0.96898 | 0.008811 | 0.77777778 | 0.22222 | 0.99119 | 0.42857 | 0.9772  | 0.292682927 |
| 3     | 2  | 8  | 7  | 918 | 0.98396 | 0.008639 | 0.77777778 | 0.22222 | 0.99136 | 0.2     | 0.99243 | 0.210526316 |
| 4     | 9  | 2  | 5  | 919 | 0.99251 | 0.002172 | 0.35714286 | 0.64286 | 0.99783 | 0.81818 | 0.99459 | 0.72        |
| 5     | 3  | 7  | 1  | 924 | 0.99144 | 0.007519 | 0.25       | 0.75    | 0.99248 | 0.3     | 0.99892 | 0.428571429 |
| 6     | 7  | 4  | 4  | 920 | 0.99144 | 0.004329 | 0.36363636 | 0.63636 | 0.99567 | 0.63636 | 0.99567 | 0.636363636 |
| 7     | 2  | 6  | 4  | 923 | 0.9893  | 0.006459 | 0.66666667 | 0.33333 | 0.99354 | 0.25    | 0.99569 | 0.285714286 |
| 8     | 5  | 8  | 8  | 914 | 0.98289 | 0.008677 | 0.61538462 | 0.38462 | 0.99132 | 0.38462 | 0.99132 | 0.384615385 |
| 9     | 4  | 6  | 4  | 921 | 0.9893  | 0.006472 | 0.5        | 0.5     | 0.99353 | 0.4     | 0.99568 | 0.444444444 |
| 10    | 2  | 8  | 9  | 916 | 0.98182 | 0.008658 | 0.81818182 | 0.18182 | 0.99134 | 0.2     | 0.99027 | 0.19047619  |
| 11    | 7  | 5  | 1  | 922 | 0.99358 | 0.005394 | 0.125      | 0.875   | 0.99461 | 0.58333 | 0.99892 | 0.7         |
| 12    | 5  | 8  | 12 | 910 | 0.97861 | 0.008715 | 0.70588235 | 0.29412 | 0.99129 | 0.38462 | 0.98698 | 0.333333333 |
| 13    | 4  | 7  | 13 | 911 | 0.97861 | 0.007625 | 0.76470588 | 0.23529 | 0.99237 | 0.36364 | 0.98593 | 0.285714286 |
| 14    | 3  | 6  | 4  | 922 | 0.9893  | 0.006466 | 0.57142857 | 0.42857 | 0.99353 | 0.33333 | 0.99568 | 0.375       |
| 15    | 6  | 5  | 11 | 913 | 0.98289 | 0.005447 | 0.64705882 | 0.35294 | 0.99455 | 0.54545 | 0.9881  | 0.428571429 |
| 16    | 10 | 1  | 6  | 918 | 0.99251 | 0.001088 | 0.375      | 0.625   | 0.99891 | 0.90909 | 0.99351 | 0.740740741 |
| 17    | 3  | 9  | 4  | 919 | 0.9861  | 0.009698 | 0.57142857 | 0.42857 | 0.9903  | 0.25    | 0.99567 | 0.315789474 |
| 18    | 0  | 7  | 2  | 926 | 0.99037 | 0.007503 | 1          | 0       | 0.9925  | 0       | 0.99784 | $\infty$    |
| 19    | 3  | 6  | 8  | 918 | 0.98503 | 0.006494 | 0.72727273 | 0.27273 | 0.99351 | 0.33333 | 0.99136 | 0.3         |
| 20    | 2  | 9  | 9  | 915 | 0.98075 | 0.00974  | 0.81818182 | 0.18182 | 0.99026 | 0.18182 | 0.99026 | 0.181818182 |
| 21    | 2  | 7  | 6  | 920 | 0.9861  | 0.007551 | 0.75       | 0.25    | 0.99245 | 0.22222 | 0.99352 | 0.235294118 |
| 22    | 5  | 3  | 4  | 923 | 0.99251 | 0.00324  | 0.44444444 | 0.55556 | 0.99676 | 0.625   | 0.99569 | 0.588235294 |
| 23    | 2  | 7  | 6  | 920 | 0.9861  | 0.007551 | 0.75       | 0.25    | 0.99245 | 0.22222 | 0.99352 | 0.235294118 |
| 24    | 1  | 7  | 6  | 921 | 0.9861  | 0.007543 | 0.85714286 | 0.14286 | 0.99246 | 0.125   | 0.99353 | 0.133333333 |
| 25    | 0  | 10 | 2  | 923 | 0.98717 | 0.010718 | 1          | 0       | 0.98928 | 0       | 0.99784 | $\infty$    |
| 26    | 3  | 7  | 10 | 915 | 0.98182 | 0.007592 | 0.76923077 | 0.23077 | 0.99241 | 0.3     | 0.98919 | 0.260869565 |

**INCEPTION-RESNET-V2-DATASET-2 (MODEL-8)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR  | FNMR/FNR   | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|----------|------------|---------|---------|---------|---------|-------------|
| 27    | 4  | 5  | 2  | 924 | 0.99251 | 0.005382 | 0.33333333 | 0.66667 | 0.99462 | 0.44444 | 0.99784 | 0.53333333  |
| 28    | 5  | 6  | 6  | 918 | 0.98717 | 0.006494 | 0.54545455 | 0.45455 | 0.99351 | 0.45455 | 0.99351 | 0.45454545  |
| 29    | 6  | 5  | 13 | 911 | 0.98075 | 0.005459 | 0.68421053 | 0.31579 | 0.99454 | 0.54545 | 0.98593 | 0.4         |
| 30    | 4  | 6  | 12 | 913 | 0.98075 | 0.006529 | 0.75       | 0.25    | 0.99347 | 0.4     | 0.98703 | 0.307692308 |
| 31    | 7  | 5  | 10 | 913 | 0.98396 | 0.005447 | 0.58823529 | 0.41176 | 0.99455 | 0.58333 | 0.98917 | 0.482758621 |
| 32    | 3  | 7  | 3  | 922 | 0.9893  | 0.007535 | 0.5        | 0.5     | 0.99247 | 0.3     | 0.99676 | 0.375       |
| 33    | 0  | 9  | 10 | 916 | 0.97968 | 0.00973  | 1          | 0       | 0.99027 | 0       | 0.9892  | $\infty$    |
| 34    | 4  | 8  | 18 | 905 | 0.97219 | 0.008762 | 0.81818182 | 0.18182 | 0.99124 | 0.33333 | 0.9805  | 0.235294118 |
| 35    | 2  | 11 | 16 | 906 | 0.97112 | 0.011996 | 0.88888889 | 0.11111 | 0.988   | 0.15385 | 0.98265 | 0.129032258 |
| 36    | 1  | 11 | 6  | 917 | 0.98182 | 0.011853 | 0.85714286 | 0.14286 | 0.98815 | 0.08333 | 0.9935  | 0.105263158 |
| 37    | 2  | 7  | 4  | 922 | 0.98824 | 0.007535 | 0.66666667 | 0.33333 | 0.99247 | 0.22222 | 0.99568 | 0.266666667 |
| 38    | 2  | 9  | 16 | 908 | 0.97326 | 0.009815 | 0.88888889 | 0.11111 | 0.99019 | 0.18182 | 0.98268 | 0.137931034 |
| 39    | 5  | 8  | 14 | 908 | 0.97647 | 0.008734 | 0.73684211 | 0.26316 | 0.99127 | 0.38462 | 0.98482 | 0.3125      |
| 40    | 1  | 12 | 2  | 920 | 0.98503 | 0.012876 | 0.66666667 | 0.33333 | 0.98712 | 0.07692 | 0.99783 | 0.125       |
| 41    | 1  | 8  | 7  | 919 | 0.98396 | 0.00863  | 0.875      | 0.125   | 0.99137 | 0.11111 | 0.99244 | 0.117647059 |
| 42    | 1  | 11 | 12 | 911 | 0.9754  | 0.011931 | 0.92307692 | 0.07692 | 0.98807 | 0.08333 | 0.987   | 0.08        |
| 43    | 5  | 5  | 7  | 918 | 0.98717 | 0.005417 | 0.58333333 | 0.41667 | 0.99458 | 0.5     | 0.99243 | 0.45454545  |
| 44    | 0  | 9  | 1  | 925 | 0.9893  | 0.009636 | 1          | 0       | 0.99036 | 0       | 0.99892 | $\infty$    |
| 45    | 0  | 9  | 11 | 915 | 0.97861 | 0.00974  | 1          | 0       | 0.99026 | 0       | 0.98812 | $\infty$    |
| 46    | 3  | 8  | 13 | 911 | 0.97754 | 0.008705 | 0.8125     | 0.1875  | 0.99129 | 0.27273 | 0.98593 | 0.22222222  |
| 47    | 6  | 6  | 8  | 915 | 0.98503 | 0.006515 | 0.57142857 | 0.42857 | 0.99349 | 0.5     | 0.99133 | 0.461538462 |
| 48    | 7  | 7  | 11 | 910 | 0.98075 | 0.007634 | 0.61111111 | 0.38889 | 0.99237 | 0.5     | 0.98806 | 0.4375      |
| 49    | 0  | 9  | 6  | 920 | 0.98396 | 0.009688 | 1          | 0       | 0.99031 | 0       | 0.99352 | $\infty$    |
| 50    | 0  | 6  | 3  | 926 | 0.99037 | 0.006438 | 1          | 0       | 0.99356 | 0       | 0.99677 | $\infty$    |
| 51    | 0  | 9  | 11 | 915 | 0.97861 | 0.00974  | 1          | 0       | 0.99026 | 0       | 0.98812 | $\infty$    |
| 52    | 1  | 8  | 6  | 920 | 0.98503 | 0.008621 | 0.85714286 | 0.14286 | 0.99138 | 0.11111 | 0.99352 | 0.125       |
| 53    | 4  | 6  | 4  | 921 | 0.9893  | 0.006472 | 0.5        | 0.5     | 0.99353 | 0.4     | 0.99568 | 0.44444444  |

**INCEPTION-RESNET-V2-DATASET-2 (MODEL-8)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR  | FNMR/FNR   | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|----------|------------|---------|---------|---------|---------|-------------|
| 54    | 4  | 8  | 17 | 906 | 0.97326 | 0.008753 | 0.80952381 | 0.19048 | 0.99125 | 0.33333 | 0.98158 | 0.242424242 |
| 55    | 2  | 5  | 3  | 925 | 0.99144 | 0.005376 | 0.6        | 0.4     | 0.99462 | 0.28571 | 0.99677 | 0.333333333 |
| 56    | 0  | 6  | 1  | 928 | 0.99251 | 0.006424 | 1          | 0       | 0.99358 | 0       | 0.99892 | $\infty$    |
| 57    | 1  | 5  | 1  | 928 | 0.99358 | 0.005359 | 0.5        | 0.5     | 0.99464 | 0.16667 | 0.99892 | 0.25        |
| 58    | 6  | 4  | 5  | 920 | 0.99037 | 0.004329 | 0.45454545 | 0.54545 | 0.99567 | 0.6     | 0.99459 | 0.571428571 |
| 59    | 0  | 2  | 1  | 932 | 0.99679 | 0.002141 | 1          | 0       | 0.99786 | 0       | 0.99893 | $\infty$    |
| 60    | 5  | 6  | 6  | 918 | 0.98717 | 0.006494 | 0.54545455 | 0.45455 | 0.99351 | 0.45455 | 0.99351 | 0.454545455 |
| 61    | 5  | 6  | 5  | 919 | 0.98824 | 0.006486 | 0.5        | 0.5     | 0.99351 | 0.45455 | 0.99459 | 0.476190476 |
| 62    | 3  | 8  | 11 | 913 | 0.97968 | 0.008686 | 0.78571429 | 0.21429 | 0.99131 | 0.27273 | 0.9881  | 0.24        |
| 63    | 1  | 8  | 3  | 923 | 0.98824 | 0.008593 | 0.75       | 0.25    | 0.99141 | 0.11111 | 0.99676 | 0.153846154 |
| 64    | 1  | 4  | 0  | 930 | 0.99572 | 0.004283 | 0          | 1       | 0.99572 | 0.2     | 1       | 0.333333333 |
| 65    | 3  | 10 | 8  | 914 | 0.98075 | 0.010823 | 0.72727273 | 0.27273 | 0.98918 | 0.23077 | 0.99132 | 0.25        |
| 66    | 4  | 7  | 5  | 919 | 0.98717 | 0.007559 | 0.55555556 | 0.44444 | 0.99244 | 0.36364 | 0.99459 | 0.4         |
| 67    | 1  | 6  | 2  | 926 | 0.99144 | 0.006438 | 0.66666667 | 0.33333 | 0.99356 | 0.14286 | 0.99784 | 0.2         |
| 68    | 1  | 7  | 9  | 918 | 0.98289 | 0.007568 | 0.9        | 0.1     | 0.99243 | 0.125   | 0.99029 | 0.111111111 |
| 69    | 5  | 4  | 7  | 919 | 0.98824 | 0.004334 | 0.58333333 | 0.41667 | 0.99567 | 0.55556 | 0.99244 | 0.476190476 |
| 70    | 4  | 5  | 8  | 918 | 0.9861  | 0.005417 | 0.66666667 | 0.33333 | 0.99458 | 0.44444 | 0.99136 | 0.380952381 |
| 71    | 2  | 10 | 12 | 911 | 0.97647 | 0.010858 | 0.85714286 | 0.14286 | 0.98914 | 0.16667 | 0.987   | 0.153846154 |
| 72    | 7  | 7  | 21 | 900 | 0.97005 | 0.007718 | 0.75       | 0.25    | 0.99228 | 0.5     | 0.9772  | 0.333333333 |
| 73    | 4  | 7  | 8  | 916 | 0.98396 | 0.007584 | 0.66666667 | 0.33333 | 0.99242 | 0.36364 | 0.99134 | 0.347826087 |
| 74    | 3  | 11 | 2  | 919 | 0.9861  | 0.011828 | 0.4        | 0.6     | 0.98817 | 0.21429 | 0.99783 | 0.315789474 |
| 75    | 4  | 6  | 1  | 924 | 0.99251 | 0.006452 | 0.2        | 0.8     | 0.99355 | 0.4     | 0.99892 | 0.533333333 |
| 76    | 10 | 5  | 11 | 909 | 0.98289 | 0.00547  | 0.52380952 | 0.47619 | 0.99453 | 0.66667 | 0.98804 | 0.555555556 |
| 77    | 8  | 5  | 7  | 915 | 0.98717 | 0.005435 | 0.46666667 | 0.53333 | 0.99457 | 0.61538 | 0.99241 | 0.571428571 |
| 78    | 2  | 11 | 9  | 913 | 0.97861 | 0.011905 | 0.81818182 | 0.18182 | 0.9881  | 0.15385 | 0.99024 | 0.166666667 |
| 79    | 6  | 6  | 4  | 919 | 0.9893  | 0.006486 | 0.4        | 0.6     | 0.99351 | 0.5     | 0.99567 | 0.545454545 |
| 80    | 5  | 8  | 10 | 912 | 0.98075 | 0.008696 | 0.66666667 | 0.33333 | 0.9913  | 0.38462 | 0.98915 | 0.357142857 |



**INCEPTION-RESNET-V2-DATASET-2 (MODEL-8)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR  | FNMR/FNR   | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|----------|------------|----------|---------|---------|---------|-------------|
| 81    | 7  | 2  | 6  | 920 | 0.99144 | 0.002169 | 0.46153846 | 0.53846  | 0.99783 | 0.77778 | 0.99352 | 0.636363636 |
| 82    | 2  | 5  | 2  | 926 | 0.99251 | 0.005371 | 0.5        | 0.5      | 0.99463 | 0.28571 | 0.99784 | 0.363636364 |
| 83    | 12 | 3  | 7  | 913 | 0.9893  | 0.003275 | 0.36842105 | 0.63158  | 0.99672 | 0.8     | 0.99239 | 0.705882353 |
| 84    | 2  | 10 | 3  | 920 | 0.9861  | 0.010753 | 0.6        | 0.4      | 0.98925 | 0.16667 | 0.99675 | 0.235294118 |
| 85    | 5  | 4  | 9  | 917 | 0.9861  | 0.004343 | 0.64285714 | 0.35714  | 0.99566 | 0.55556 | 0.99028 | 0.434782609 |
| 86    | 2  | 5  | 1  | 927 | 0.99358 | 0.005365 | 0.33333333 | 0.66667  | 0.99464 | 0.28571 | 0.99892 | 0.4         |
| 87    | 2  | 6  | 8  | 919 | 0.98503 | 0.006486 | 0.8        | 0.2      | 0.99351 | 0.25    | 0.99137 | 0.222222222 |
| 88    | 0  | 4  | 0  | 931 | 0.99572 | 0.004278 | $\infty$   | $\infty$ | 0.99572 | 0       | 1       | $\infty$    |
| 89    | 1  | 5  | 10 | 919 | 0.98396 | 0.005411 | 0.90909091 | 0.09091  | 0.99459 | 0.16667 | 0.98924 | 0.117647059 |
| 90    | 2  | 2  | 0  | 931 | 0.99786 | 0.002144 | 0          | 1        | 0.99786 | 0.5     | 1       | 0.666666667 |
| 91    | 1  | 5  | 1  | 928 | 0.99358 | 0.005359 | 0.5        | 0.5      | 0.99464 | 0.16667 | 0.99892 | 0.25        |
| 92    | 2  | 6  | 5  | 922 | 0.98824 | 0.006466 | 0.71428571 | 0.28571  | 0.99353 | 0.25    | 0.99461 | 0.266666667 |
| 93    | 0  | 3  | 0  | 932 | 0.99679 | 0.003209 | $\infty$   | $\infty$ | 0.99679 | 0       | 1       | $\infty$    |

### Appendix C: EXPERIMENTAL RESULTS OF INCEPTION-RESNET-V2-D3

#### INCEPTION-RESNET-V2-DATASET-3 (MODEL-9)

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 1     | 4  | 10 | 19 | 902 | 0.96898 | 0.01096 | 0.826086957 | 0.17391  | 0.98904 | 0.28571 | 0.97937 | 0.216216216 |
| 2     | 0  | 14 | 9  | 912 | 0.9754  | 0.01512 | 1           | 0        | 0.98488 | 0       | 0.99023 | $\infty$    |
| 3     | 0  | 10 | 5  | 920 | 0.98396 | 0.01075 | 1           | 0        | 0.98925 | 0       | 0.99459 | $\infty$    |
| 4     | 4  | 7  | 8  | 916 | 0.98396 | 0.00758 | 0.666666667 | 0.33333  | 0.99242 | 0.36364 | 0.99134 | 0.347826087 |
| 5     | 1  | 9  | 11 | 914 | 0.97861 | 0.00975 | 0.916666667 | 0.08333  | 0.99025 | 0.1     | 0.98811 | 0.090909091 |
| 6     | 6  | 5  | 21 | 903 | 0.97219 | 0.00551 | 0.777777778 | 0.22222  | 0.99449 | 0.54545 | 0.97727 | 0.315789474 |
| 7     | 0  | 8  | 0  | 927 | 0.99144 | 0.00856 | $\infty$    | $\infty$ | 0.99144 | 0       | 1       | $\infty$    |
| 8     | 3  | 10 | 14 | 908 | 0.97433 | 0.01089 | 0.823529412 | 0.17647  | 0.98911 | 0.23077 | 0.98482 | 0.2         |
| 9     | 2  | 8  | 4  | 921 | 0.98717 | 0.00861 | 0.666666667 | 0.33333  | 0.99139 | 0.2     | 0.99568 | 0.25        |
| 10    | 4  | 6  | 6  | 919 | 0.98717 | 0.00649 | 0.6         | 0.4      | 0.99351 | 0.4     | 0.99351 | 0.4         |
| 11    | 0  | 11 | 1  | 923 | 0.98717 | 0.01178 | 1           | 0        | 0.98822 | 0       | 0.99892 | $\infty$    |
| 12    | 1  | 12 | 19 | 903 | 0.96684 | 0.01311 | 0.95        | 0.05     | 0.98689 | 0.07692 | 0.97939 | 0.060606061 |
| 13    | 3  | 8  | 29 | 895 | 0.96043 | 0.00886 | 0.90625     | 0.09375  | 0.99114 | 0.27273 | 0.96861 | 0.139534884 |
| 14    | 0  | 9  | 0  | 926 | 0.99037 | 0.00963 | $\infty$    | $\infty$ | 0.99037 | 0       | 1       | $\infty$    |
| 15    | 3  | 8  | 5  | 919 | 0.9861  | 0.00863 | 0.625       | 0.375    | 0.99137 | 0.27273 | 0.99459 | 0.315789474 |
| 16    | 7  | 4  | 10 | 914 | 0.98503 | 0.00436 | 0.588235294 | 0.41176  | 0.99564 | 0.63636 | 0.98918 | 0.5         |
| 17    | 1  | 11 | 15 | 908 | 0.97219 | 0.01197 | 0.9375      | 0.0625   | 0.98803 | 0.08333 | 0.98375 | 0.071428571 |
| 18    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$    | $\infty$ | 0.99251 | 0       | 1       | $\infty$    |
| 19    | 0  | 9  | 4  | 922 | 0.9861  | 0.00967 | 1           | 0        | 0.99033 | 0       | 0.99568 | $\infty$    |
| 20    | 0  | 11 | 1  | 923 | 0.98717 | 0.01178 | 1           | 0        | 0.98822 | 0       | 0.99892 | $\infty$    |
| 21    | 0  | 9  | 0  | 926 | 0.99037 | 0.00963 | $\infty$    | $\infty$ | 0.99037 | 0       | 1       | $\infty$    |
| 22    | 1  | 7  | 11 | 916 | 0.98075 | 0.00758 | 0.916666667 | 0.08333  | 0.99242 | 0.125   | 0.98813 | 0.1         |
| 23    | 1  | 8  | 11 | 915 | 0.97968 | 0.00867 | 0.916666667 | 0.08333  | 0.99133 | 0.11111 | 0.98812 | 0.095238095 |
| 24    | 3  | 5  | 18 | 909 | 0.9754  | 0.00547 | 0.857142857 | 0.14286  | 0.99453 | 0.375   | 0.98058 | 0.206896552 |
| 25    | 0  | 10 | 0  | 925 | 0.9893  | 0.0107  | $\infty$    | $\infty$ | 0.9893  | 0       | 1       | $\infty$    |
| 26    | 0  | 10 | 3  | 922 | 0.9861  | 0.01073 | 1           | 0        | 0.98927 | 0       | 0.99676 | $\infty$    |

**INCEPTION-RESNET-V2-DATASET-3 (MODEL-9)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 27    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1           | 0        | 0.99035 | 0       | 0.99784 | $\infty$    |
| 28    | 3  | 8  | 11 | 913 | 0.97968 | 0.00869 | 0.785714286 | 0.21429  | 0.99131 | 0.27273 | 0.9881  | 0.24        |
| 29    | 1  | 10 | 17 | 907 | 0.97112 | 0.01091 | 0.944444444 | 0.05556  | 0.98909 | 0.09091 | 0.9816  | 0.068965517 |
| 30    | 2  | 8  | 25 | 900 | 0.96471 | 0.00881 | 0.925925926 | 0.07407  | 0.99119 | 0.2     | 0.97297 | 0.108108108 |
| 31    | 2  | 10 | 21 | 902 | 0.96684 | 0.01096 | 0.913043478 | 0.08696  | 0.98904 | 0.16667 | 0.97725 | 0.114285714 |
| 32    | 1  | 9  | 3  | 922 | 0.98717 | 0.00967 | 0.75        | 0.25     | 0.99033 | 0.1     | 0.99676 | 0.142857143 |
| 33    | 1  | 8  | 8  | 918 | 0.98289 | 0.00864 | 0.888888889 | 0.11111  | 0.99136 | 0.11111 | 0.99136 | 0.111111111 |
| 34    | 0  | 12 | 18 | 905 | 0.96791 | 0.01309 | 1           | 0        | 0.98691 | 0       | 0.9805  | $\infty$    |
| 35    | 5  | 8  | 20 | 902 | 0.97005 | 0.00879 | 0.8         | 0.2      | 0.99121 | 0.38462 | 0.97831 | 0.263157895 |
| 36    | 0  | 12 | 5  | 918 | 0.98182 | 0.0129  | 1           | 0        | 0.9871  | 0       | 0.99458 | $\infty$    |
| 37    | 0  | 9  | 1  | 925 | 0.9893  | 0.00964 | 1           | 0        | 0.99036 | 0       | 0.99892 | $\infty$    |
| 38    | 2  | 9  | 1  | 923 | 0.9893  | 0.00966 | 0.333333333 | 0.66667  | 0.99034 | 0.18182 | 0.99892 | 0.285714286 |
| 39    | 1  | 12 | 10 | 912 | 0.97647 | 0.01299 | 0.909090909 | 0.09091  | 0.98701 | 0.07692 | 0.98915 | 0.083333333 |
| 40    | 1  | 12 | 4  | 918 | 0.98289 | 0.0129  | 0.8         | 0.2      | 0.9871  | 0.07692 | 0.99566 | 0.111111111 |
| 41    | 1  | 8  | 14 | 912 | 0.97647 | 0.0087  | 0.933333333 | 0.06667  | 0.9913  | 0.11111 | 0.98488 | 0.083333333 |
| 42    | 1  | 11 | 11 | 912 | 0.97647 | 0.01192 | 0.916666667 | 0.08333  | 0.98808 | 0.08333 | 0.98808 | 0.083333333 |
| 43    | 0  | 10 | 19 | 906 | 0.96898 | 0.01092 | 1           | 0        | 0.98908 | 0       | 0.97946 | $\infty$    |
| 44    | 1  | 8  | 8  | 918 | 0.98289 | 0.00864 | 0.888888889 | 0.11111  | 0.99136 | 0.11111 | 0.99136 | 0.111111111 |
| 45    | 0  | 9  | 0  | 926 | 0.99037 | 0.00963 | $\infty$    | $\infty$ | 0.99037 | 0       | 1       | $\infty$    |
| 46    | 0  | 11 | 2  | 922 | 0.9861  | 0.01179 | 1           | 0        | 0.98821 | 0       | 0.99784 | $\infty$    |
| 47    | 4  | 8  | 20 | 903 | 0.97005 | 0.00878 | 0.833333333 | 0.16667  | 0.99122 | 0.33333 | 0.97833 | 0.222222222 |
| 48    | 6  | 8  | 43 | 878 | 0.94545 | 0.00903 | 0.87755102  | 0.12245  | 0.99097 | 0.42857 | 0.95331 | 0.19047619  |
| 49    | 0  | 9  | 4  | 922 | 0.9861  | 0.00967 | 1           | 0        | 0.99033 | 0       | 0.99568 | $\infty$    |
| 50    | 1  | 6  | 0  | 928 | 0.99358 | 0.00642 | 0           | 1        | 0.99358 | 0.14286 | 1       | 0.25        |
| 51    | 0  | 9  | 7  | 919 | 0.98289 | 0.0097  | 1           | 0        | 0.9903  | 0       | 0.99244 | $\infty$    |
| 52    | 0  | 9  | 0  | 926 | 0.99037 | 0.00963 | $\infty$    | $\infty$ | 0.99037 | 0       | 1       | $\infty$    |
| 53    | 2  | 8  | 7  | 918 | 0.98396 | 0.00864 | 0.777777778 | 0.22222  | 0.99136 | 0.2     | 0.99243 | 0.210526316 |

**INCEPTION-RESNET-V2-DATASET-3 (MODEL-9)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 54    | 0  | 12 | 2  | 921 | 0.98503 | 0.01286 | 1           | 0        | 0.98714 | 0       | 0.99783 | $\infty$    |
| 55    | 1  | 8  | 3  | 923 | 0.98824 | 0.00859 | 0.75        | 0.25     | 0.99141 | 0.11111 | 0.99676 | 0.153846154 |
| 56    | 1  | 5  | 1  | 928 | 0.99358 | 0.00536 | 0.5         | 0.5      | 0.99464 | 0.16667 | 0.99892 | 0.25        |
| 57    | 0  | 6  | 1  | 928 | 0.99251 | 0.00642 | 1           | 0        | 0.99358 | 0       | 0.99892 | $\infty$    |
| 58    | 0  | 10 | 1  | 924 | 0.98824 | 0.01071 | 1           | 0        | 0.98929 | 0       | 0.99892 | $\infty$    |
| 59    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$    | $\infty$ | 0.99251 | 0       | 1       | $\infty$    |
| 60    | 3  | 8  | 5  | 919 | 0.9861  | 0.00863 | 0.625       | 0.375    | 0.99137 | 0.27273 | 0.99459 | 0.315789474 |
| 61    | 1  | 10 | 10 | 914 | 0.97861 | 0.01082 | 0.909090909 | 0.09091  | 0.98918 | 0.09091 | 0.98918 | 0.090909091 |
| 62    | 1  | 10 | 2  | 922 | 0.98717 | 0.01073 | 0.666666667 | 0.33333  | 0.98927 | 0.09091 | 0.99784 | 0.142857143 |
| 63    | 3  | 6  | 9  | 917 | 0.98396 | 0.0065  | 0.75        | 0.25     | 0.9935  | 0.33333 | 0.99028 | 0.285714286 |
| 64    | 0  | 5  | 1  | 929 | 0.99358 | 0.00535 | 1           | 0        | 0.99465 | 0       | 0.99892 | $\infty$    |
| 65    | 1  | 12 | 15 | 907 | 0.97112 | 0.01306 | 0.9375      | 0.0625   | 0.98694 | 0.07692 | 0.98373 | 0.068965517 |
| 66    | 2  | 9  | 8  | 916 | 0.98182 | 0.00973 | 0.8         | 0.2      | 0.99027 | 0.18182 | 0.99134 | 0.19047619  |
| 67    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$    | $\infty$ | 0.99251 | 0       | 1       | $\infty$    |
| 68    | 0  | 8  | 0  | 927 | 0.99144 | 0.00856 | $\infty$    | $\infty$ | 0.99144 | 0       | 1       | $\infty$    |
| 69    | 0  | 9  | 1  | 925 | 0.9893  | 0.00964 | 1           | 0        | 0.99036 | 0       | 0.99892 | $\infty$    |
| 70    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1           | 0        | 0.99035 | 0       | 0.99784 | $\infty$    |
| 71    | 0  | 12 | 15 | 908 | 0.97112 | 0.01304 | 1           | 0        | 0.98696 | 0       | 0.98375 | $\infty$    |
| 72    | 3  | 11 | 13 | 908 | 0.97433 | 0.01197 | 0.8125      | 0.1875   | 0.98803 | 0.21429 | 0.98588 | 0.2         |
| 73    | 5  | 9  | 21 | 900 | 0.96791 | 0.0099  | 0.807692308 | 0.19231  | 0.9901  | 0.35714 | 0.9772  | 0.25        |
| 74    | 1  | 13 | 7  | 914 | 0.97861 | 0.01402 | 0.875       | 0.125    | 0.98598 | 0.07143 | 0.9924  | 0.090909091 |
| 75    | 0  | 10 | 0  | 925 | 0.9893  | 0.0107  | $\infty$    | $\infty$ | 0.9893  | 0       | 1       | $\infty$    |
| 76    | 6  | 9  | 38 | 882 | 0.94973 | 0.0101  | 0.863636364 | 0.13636  | 0.9899  | 0.4     | 0.9587  | 0.203389831 |
| 77    | 4  | 9  | 24 | 898 | 0.96471 | 0.00992 | 0.857142857 | 0.14286  | 0.99008 | 0.30769 | 0.97397 | 0.195121951 |
| 78    | 2  | 11 | 7  | 915 | 0.98075 | 0.01188 | 0.777777778 | 0.22222  | 0.98812 | 0.15385 | 0.99241 | 0.181818182 |
| 79    | 5  | 7  | 16 | 907 | 0.9754  | 0.00766 | 0.761904762 | 0.2381   | 0.99234 | 0.41667 | 0.98267 | 0.303030303 |
| 80    | 2  | 11 | 23 | 899 | 0.96364 | 0.01209 | 0.92        | 0.08     | 0.98791 | 0.15385 | 0.97505 | 0.105263158 |

**INCEPTION-RESNET-V2-DATASET-3 (MODEL-9)**

| <b>CLASS</b> | <b>TP</b> | <b>FP</b> | <b>FN</b> | <b>TN</b> | <b>ACC</b> | <b>FMR/FPR</b> | <b>FNMR/FNR</b> | <b>TPR</b> | <b>TNR</b> | <b>PPV</b> | <b>NPV</b> | <b>F-MEASURE</b> |
|--------------|-----------|-----------|-----------|-----------|------------|----------------|-----------------|------------|------------|------------|------------|------------------|
| 81           | 2         | 7         | 6         | 920       | 0.9861     | 0.00755        | 0.75            | 0.25       | 0.99245    | 0.22222    | 0.99352    | 0.235294118      |
| 82           | 0         | 7         | 0         | 928       | 0.99251    | 0.00749        | $\infty$        | $\infty$   | 0.99251    | 0          | 1          | $\infty$         |
| 83           | 10        | 5         | 8         | 912       | 0.9861     | 0.00545        | 0.444444444     | 0.55556    | 0.99455    | 0.66667    | 0.9913     | 0.606060606      |
| 84           | 6         | 6         | 12        | 911       | 0.98075    | 0.00654        | 0.666666667     | 0.33333    | 0.99346    | 0.5        | 0.987      | 0.4              |
| 85           | 5         | 4         | 11        | 915       | 0.98396    | 0.00435        | 0.6875          | 0.3125     | 0.99565    | 0.55556    | 0.98812    | 0.4              |
| 86           | 3         | 4         | 7         | 921       | 0.98824    | 0.00432        | 0.7             | 0.3        | 0.99568    | 0.42857    | 0.99246    | 0.352941176      |
| 87           | 1         | 7         | 4         | 923       | 0.98824    | 0.00753        | 0.8             | 0.2        | 0.99247    | 0.125      | 0.99569    | 0.153846154      |
| 88           | 0         | 4         | 3         | 928       | 0.99251    | 0.00429        | 1               | 0          | 0.99571    | 0          | 0.99678    | $\infty$         |
| 89           | 0         | 6         | 9         | 920       | 0.98396    | 0.00648        | 1               | 0          | 0.99352    | 0          | 0.99031    | $\infty$         |
| 90           | 0         | 4         | 0         | 931       | 0.99572    | 0.00428        | $\infty$        | $\infty$   | 0.99572    | 0          | 1          | $\infty$         |
| 91           | 1         | 5         | 4         | 925       | 0.99037    | 0.00538        | 0.8             | 0.2        | 0.99462    | 0.16667    | 0.99569    | 0.181818182      |
| 92           | 3         | 5         | 4         | 923       | 0.99037    | 0.00539        | 0.571428571     | 0.42857    | 0.99461    | 0.375      | 0.99569    | 0.4              |
| 93           | 0         | 3         | 0         | 932       | 0.99679    | 0.00321        | $\infty$        | $\infty$   | 0.99679    | 0          | 1          | $\infty$         |

**Appendix D: EXPERIMENTAL RESULTS OF INCEPTION-V3-D1**  
**INCEPTION-V3- DATASET-1 (MODEL-4)**

| CLASS | TP | FP | FN | TN  | ACC      | FMR/FPR  | FNMR/FNR  | TPR      | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|----------|----------|-----------|----------|----------|----------|----------|-------------|
| 1     | 1  | 3  | 1  | 303 | 0.987013 | 0.009804 | 0.5       | 0.5      | 0.990196 | 0.25     | 0.990196 | 0.333333333 |
| 2     | 1  | 3  | 9  | 295 | 0.961039 | 0.010067 | 0.9       | 0.1      | 0.989933 | 0.25     | 0.989933 | 0.142857143 |
| 3     | 1  | 2  | 2  | 303 | 0.987013 | 0.006557 | 0.6666667 | 0.333333 | 0.993443 | 0.333333 | 0.993443 | 0.333333333 |
| 4     | 1  | 3  | 2  | 302 | 0.983766 | 0.009836 | 0.6666667 | 0.333333 | 0.990164 | 0.25     | 0.990164 | 0.285714286 |
| 5     | 1  | 2  | 2  | 303 | 0.987013 | 0.006557 | 0.6666667 | 0.333333 | 0.993443 | 0.333333 | 0.993443 | 0.333333333 |
| 6     | 2  | 2  | 1  | 303 | 0.99026  | 0.006557 | 0.3333333 | 0.666667 | 0.993443 | 0.5      | 0.993443 | 0.571428571 |
| 7     | 0  | 3  | 2  | 303 | 0.983766 | 0.009804 | 1         | 0        | 0.990196 | 0        | 0.990196 | $\infty$    |
| 8     | 0  | 4  | 3  | 301 | 0.977273 | 0.013115 | 1         | 0        | 0.986885 | 0        | 0.986885 | $\infty$    |
| 9     | 1  | 2  | 9  | 296 | 0.964286 | 0.006711 | 0.9       | 0.1      | 0.993289 | 0.333333 | 0.993289 | 0.153846154 |
| 10    | 1  | 2  | 2  | 303 | 0.987013 | 0.006557 | 0.6666667 | 0.333333 | 0.993443 | 0.333333 | 0.993443 | 0.333333333 |
| 11    | 0  | 4  | 1  | 303 | 0.983766 | 0.013029 | 1         | 0        | 0.986971 | 0        | 0.986971 | $\infty$    |
| 12    | 0  | 4  | 4  | 300 | 0.974026 | 0.013158 | 1         | 0        | 0.986842 | 0        | 0.986842 | $\infty$    |
| 13    | 0  | 4  | 7  | 297 | 0.964286 | 0.013289 | 1         | 0        | 0.986711 | 0        | 0.986711 | $\infty$    |
| 14    | 0  | 3  | 0  | 305 | 0.99026  | 0.00974  | $\infty$  | $\infty$ | 0.99026  | 0        | 0.99026  | $\infty$    |
| 15    | 2  | 2  | 2  | 302 | 0.987013 | 0.006579 | 0.5       | 0.5      | 0.993421 | 0.5      | 0.993421 | 0.5         |
| 16    | 2  | 2  | 1  | 303 | 0.99026  | 0.006557 | 0.3333333 | 0.666667 | 0.993443 | 0.5      | 0.993443 | 0.571428571 |
| 17    | 0  | 2  | 3  | 303 | 0.983766 | 0.006557 | 1         | 0        | 0.993443 | 0        | 0.993443 | $\infty$    |
| 18    | 0  | 3  | 3  | 302 | 0.980519 | 0.009836 | 1         | 0        | 0.990164 | 0        | 0.990164 | $\infty$    |
| 19    | 0  | 4  | 6  | 298 | 0.967532 | 0.013245 | 1         | 0        | 0.986755 | 0        | 0.986755 | $\infty$    |
| 20    | 0  | 3  | 3  | 302 | 0.980519 | 0.009836 | 1         | 0        | 0.990164 | 0        | 0.990164 | $\infty$    |
| 21    | 0  | 3  | 0  | 305 | 0.99026  | 0.00974  | $\infty$  | $\infty$ | 0.99026  | 0        | 0.99026  | $\infty$    |
| 22    | 1  | 2  | 3  | 302 | 0.983766 | 0.006579 | 0.75      | 0.25     | 0.993421 | 0.333333 | 0.993421 | 0.285714286 |
| 23    | 0  | 3  | 1  | 304 | 0.987013 | 0.009772 | 1         | 0        | 0.990228 | 0        | 0.990228 | $\infty$    |
| 24    | 1  | 2  | 0  | 305 | 0.993506 | 0.006515 | 0         | 1        | 0.993485 | 0.333333 | 0.993485 | 0.5         |
| 25    | 0  | 3  | 0  | 305 | 0.99026  | 0.00974  | $\infty$  | $\infty$ | 0.99026  | 0        | 0.99026  | $\infty$    |
| 26    | 1  | 2  | 10 | 295 | 0.961039 | 0.006734 | 0.9090909 | 0.090909 | 0.993266 | 0.333333 | 0.993266 | 0.142857143 |
| 27    | 0  | 3  | 1  | 304 | 0.987013 | 0.009772 | 1         | 0        | 0.990228 | 0        | 0.990228 | $\infty$    |

# INCEPTION-V3- DATASET-1 (MODEL-4)

| CLASS | TP | FP | FN | TN  | ACC      | FMR/FPR  | FNMR/FNR  | TPR      | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|----------|----------|-----------|----------|----------|----------|----------|-------------|
| 28    | 0  | 4  | 2  | 302 | 0.980519 | 0.013072 | 1         | 0        | 0.986928 | 0        | 0.986928 | $\infty$    |
| 29    | 0  | 4  | 1  | 303 | 0.983766 | 0.013029 | 1         | 0        | 0.986971 | 0        | 0.986971 | $\infty$    |
| 30    | 0  | 3  | 4  | 301 | 0.977273 | 0.009868 | 1         | 0        | 0.990132 | 0        | 0.990132 | $\infty$    |
| 31    | 0  | 4  | 5  | 299 | 0.970779 | 0.013201 | 1         | 0        | 0.986799 | 0        | 0.986799 | $\infty$    |
| 32    | 0  | 3  | 4  | 301 | 0.977273 | 0.009868 | 1         | 0        | 0.990132 | 0        | 0.990132 | $\infty$    |
| 33    | 1  | 2  | 0  | 305 | 0.993506 | 0.006515 | 0         | 1        | 0.993485 | 0.333333 | 0.993485 | 0.5         |
| 34    | 0  | 4  | 1  | 303 | 0.983766 | 0.013029 | 1         | 0        | 0.986971 | 0        | 0.986971 | $\infty$    |
| 35    | 0  | 4  | 3  | 301 | 0.977273 | 0.013115 | 1         | 0        | 0.986885 | 0        | 0.986885 | $\infty$    |
| 36    | 0  | 4  | 2  | 302 | 0.980519 | 0.013072 | 1         | 0        | 0.986928 | 0        | 0.986928 | $\infty$    |
| 37    | 0  | 3  | 2  | 303 | 0.983766 | 0.009804 | 1         | 0        | 0.990196 | 0        | 0.990196 | $\infty$    |
| 38    | 0  | 4  | 1  | 303 | 0.983766 | 0.013029 | 1         | 0        | 0.986971 | 0        | 0.986971 | $\infty$    |
| 39    | 1  | 3  | 11 | 293 | 0.954545 | 0.010135 | 0.9166667 | 0.083333 | 0.989865 | 0.25     | 0.989865 | 0.125       |
| 40    | 1  | 3  | 7  | 297 | 0.967532 | 0.01     | 0.875     | 0.125    | 0.99     | 0.25     | 0.99     | 0.166666667 |
| 41    | 0  | 3  | 2  | 303 | 0.983766 | 0.009804 | 1         | 0        | 0.990196 | 0        | 0.990196 | $\infty$    |
| 42    | 0  | 4  | 3  | 301 | 0.977273 | 0.013115 | 1         | 0        | 0.986885 | 0        | 0.986885 | $\infty$    |
| 43    | 1  | 2  | 11 | 294 | 0.957792 | 0.006757 | 0.9166667 | 0.083333 | 0.993243 | 0.333333 | 0.993243 | 0.133333333 |
| 44    | 0  | 3  | 4  | 301 | 0.977273 | 0.009868 | 1         | 0        | 0.990132 | 0        | 0.990132 | $\infty$    |
| 45    | 0  | 3  | 1  | 304 | 0.987013 | 0.009772 | 1         | 0        | 0.990228 | 0        | 0.990228 | $\infty$    |
| 46    | 0  | 4  | 4  | 300 | 0.974026 | 0.013158 | 1         | 0        | 0.986842 | 0        | 0.986842 | $\infty$    |
| 47    | 0  | 4  | 5  | 299 | 0.970779 | 0.013201 | 1         | 0        | 0.986799 | 0        | 0.986799 | $\infty$    |
| 48    | 2  | 3  | 6  | 297 | 0.970779 | 0.01     | 0.75      | 0.25     | 0.99     | 0.4      | 0.99     | 0.307692308 |
| 49    | 0  | 3  | 1  | 304 | 0.987013 | 0.009772 | 1         | 0        | 0.990228 | 0        | 0.990228 | $\infty$    |
| 50    | 0  | 2  | 0  | 306 | 0.993506 | 0.006494 | $\infty$  | $\infty$ | 0.993506 | 0        | 0.993506 | $\infty$    |
| 51    | 0  | 3  | 1  | 304 | 0.987013 | 0.009772 | 1         | 0        | 0.990228 | 0        | 0.990228 | $\infty$    |
| 52    | 0  | 3  | 1  | 304 | 0.987013 | 0.009772 | 1         | 0        | 0.990228 | 0        | 0.990228 | $\infty$    |
| 53    | 0  | 3  | 3  | 302 | 0.980519 | 0.009836 | 1         | 0        | 0.990164 | 0        | 0.990164 | $\infty$    |
| 54    | 1  | 3  | 3  | 301 | 0.980519 | 0.009868 | 0.75      | 0.25     | 0.990132 | 0.25     | 0.990132 | 0.25        |
| 55    | 0  | 2  | 0  | 306 | 0.993506 | 0.006494 | $\infty$  | $\infty$ | 0.993506 | 0        | 0.993506 | $\infty$    |

### INCEPTION-V3- DATASET-1 (MODEL-4)

| CLASS | TP | FP | FN | TN  | ACC      | FMR/FPR  | FNMR/FNR  | TPR      | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|----------|----------|-----------|----------|----------|----------|----------|-------------|
| 56    | 0  | 2  | 3  | 303 | 0.983766 | 0.006557 | 1         | 0        | 0.993443 | 0        | 0.993443 | $\infty$    |
| 57    | 0  | 2  | 1  | 305 | 0.99026  | 0.006515 | 1         | 0        | 0.993485 | 0        | 0.993485 | $\infty$    |
| 58    | 0  | 3  | 8  | 297 | 0.964286 | 0.01     | 1         | 0        | 0.99     | 0        | 0.99     | $\infty$    |
| 59    | 3  | 2  | 4  | 299 | 0.980519 | 0.006645 | 0.5714286 | 0.428571 | 0.993355 | 0.6      | 0.993355 | 0.5         |
| 60    | 2  | 2  | 3  | 301 | 0.983766 | 0.006601 | 0.6       | 0.4      | 0.993399 | 0.5      | 0.993399 | 0.444444444 |
| 61    | 0  | 4  | 1  | 303 | 0.983766 | 0.013029 | 1         | 0        | 0.986971 | 0        | 0.986971 | $\infty$    |
| 62    | 0  | 4  | 2  | 302 | 0.980519 | 0.013072 | 1         | 0        | 0.986928 | 0        | 0.986928 | $\infty$    |
| 63    | 0  | 3  | 0  | 305 | 0.99026  | 0.00974  | $\infty$  | $\infty$ | 0.99026  | 0        | 0.99026  | $\infty$    |
| 64    | 0  | 2  | 0  | 306 | 0.993506 | 0.006494 | $\infty$  | $\infty$ | 0.993506 | 0        | 0.993506 | $\infty$    |
| 65    | 0  | 4  | 0  | 304 | 0.987013 | 0.012987 | $\infty$  | $\infty$ | 0.987013 | 0        | 0.987013 | $\infty$    |
| 66    | 0  | 4  | 1  | 303 | 0.983766 | 0.013029 | 1         | 0        | 0.986971 | 0        | 0.986971 | $\infty$    |
| 67    | 1  | 1  | 2  | 304 | 0.99026  | 0.003279 | 0.6666667 | 0.333333 | 0.996721 | 0.5      | 0.996721 | 0.4         |
| 68    | 0  | 3  | 1  | 304 | 0.987013 | 0.009772 | 1         | 0        | 0.990228 | 0        | 0.990228 | $\infty$    |
| 69    | 0  | 3  | 0  | 305 | 0.99026  | 0.00974  | $\infty$  | $\infty$ | 0.99026  | 0        | 0.99026  | $\infty$    |
| 70    | 0  | 3  | 8  | 297 | 0.964286 | 0.01     | 1         | 0        | 0.99     | 0        | 0.99     | $\infty$    |
| 71    | 2  | 2  | 1  | 303 | 0.99026  | 0.006557 | 0.3333333 | 0.666667 | 0.993443 | 0.5      | 0.993443 | 0.571428571 |
| 72    | 1  | 3  | 1  | 303 | 0.987013 | 0.009804 | 0.5       | 0.5      | 0.990196 | 0.25     | 0.990196 | 0.333333333 |
| 73    | 2  | 3  | 10 | 293 | 0.957792 | 0.010135 | 0.8333333 | 0.166667 | 0.989865 | 0.4      | 0.989865 | 0.235294118 |
| 74    | 0  | 5  | 1  | 302 | 0.980519 | 0.016287 | 1         | 0        | 0.983713 | 0        | 0.983713 | $\infty$    |
| 75    | 2  | 1  | 1  | 304 | 0.993506 | 0.003279 | 0.3333333 | 0.666667 | 0.996721 | 0.666667 | 0.996721 | 0.666666667 |
| 76    | 2  | 3  | 7  | 296 | 0.967532 | 0.010033 | 0.7777778 | 0.222222 | 0.989967 | 0.4      | 0.989967 | 0.285714286 |
| 77    | 1  | 3  | 8  | 296 | 0.964286 | 0.010033 | 0.8888889 | 0.111111 | 0.989967 | 0.25     | 0.989967 | 0.153846154 |
| 78    | 2  | 2  | 9  | 295 | 0.964286 | 0.006734 | 0.8181818 | 0.181818 | 0.993266 | 0.5      | 0.993266 | 0.266666667 |
| 79    | 1  | 3  | 5  | 299 | 0.974026 | 0.009934 | 0.8333333 | 0.166667 | 0.990066 | 0.25     | 0.990066 | 0.2         |
| 80    | 0  | 4  | 8  | 296 | 0.961039 | 0.013333 | 1         | 0        | 0.986667 | 0        | 0.986667 | $\infty$    |
| 81    | 1  | 2  | 1  | 304 | 0.99026  | 0.006536 | 0.5       | 0.5      | 0.993464 | 0.333333 | 0.993464 | 0.4         |
| 82    | 0  | 2  | 1  | 305 | 0.99026  | 0.006515 | 1         | 0        | 0.993485 | 0        | 0.993485 | $\infty$    |
| 83    | 3  | 2  | 2  | 301 | 0.987013 | 0.006601 | 0.4       | 0.6      | 0.993399 | 0.6      | 0.993399 | 0.6         |



**INCEPTION-V3- DATASET-1 (MODEL-4)**

| CLASS | TP | FP | FN | TN  | ACC      | FMR/FPR  | FNMR/FNR | TPR      | TNR      | PPV      | NPV      | F-MEASURE   |
|-------|----|----|----|-----|----------|----------|----------|----------|----------|----------|----------|-------------|
| 84    | 0  | 4  | 1  | 303 | 0.983766 | 0.013029 | 1        | 0        | 0.986971 | 0        | 0.986971 | $\infty$    |
| 85    | 2  | 1  | 3  | 302 | 0.987013 | 0.0033   | 0.6      | 0.4      | 0.9967   | 0.666667 | 0.9967   | 0.5         |
| 86    | 0  | 2  | 1  | 305 | 0.99026  | 0.006515 | 1        | 0        | 0.993485 | 0        | 0.993485 | $\infty$    |
| 87    | 0  | 3  | 4  | 301 | 0.977273 | 0.009868 | 1        | 0        | 0.990132 | 0        | 0.990132 | $\infty$    |
| 88    | 0  | 1  | 0  | 307 | 0.996753 | 0.003247 | $\infty$ | $\infty$ | 0.996753 | 0        | 0.996753 | $\infty$    |
| 89    | 0  | 2  | 6  | 300 | 0.974026 | 0.006623 | 1        | 0        | 0.993377 | 0        | 0.993377 | $\infty$    |
| 90    | 0  | 1  | 0  | 307 | 0.996753 | 0.003247 | $\infty$ | $\infty$ | 0.996753 | 0        | 0.996753 | $\infty$    |
| 91    | 1  | 1  | 0  | 306 | 0.996753 | 0.003257 | 0        | 1        | 0.996743 | 0.5      | 0.996743 | 0.666666667 |
| 92    | 2  | 1  | 0  | 305 | 0.996753 | 0.003268 | 0        | 1        | 0.996732 | 0.666667 | 0.996732 | 0.8         |
| 93    | 0  | 1  | 0  | 307 | 0.996753 | 0.003247 | $\infty$ | $\infty$ | 0.996753 | 0        | 0.996753 | $\infty$    |

**Appendix E: EXPERIMENTAL RESULTS OF INCEPTION-V3-D2****INCEPTION-V3- DATASET-2 (MODEL-5)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|----------|---------|---------|---------|---------|-------------|
| 1     | 9  | 5  | 4  | 917 | 0.99037 | 0.00542 | 0.307692 | 0.69231 | 0.99458 | 0.64286 | 0.99566 | 0.666666667 |
| 2     | 10 | 4  | 5  | 916 | 0.99037 | 0.00435 | 0.333333 | 0.66667 | 0.99565 | 0.71429 | 0.99457 | 0.689655172 |
| 3     | 6  | 6  | 3  | 920 | 0.99037 | 0.00648 | 0.333333 | 0.66667 | 0.99352 | 0.5     | 0.99675 | 0.571428571 |
| 4     | 9  | 2  | 3  | 921 | 0.99465 | 0.00217 | 0.25     | 0.75    | 0.99783 | 0.81818 | 0.99675 | 0.782608696 |
| 5     | 8  | 2  | 3  | 922 | 0.99465 | 0.00216 | 0.272727 | 0.72727 | 0.99784 | 0.8     | 0.99676 | 0.761904762 |
| 6     | 10 | 1  | 3  | 921 | 0.99572 | 0.00108 | 0.230769 | 0.76923 | 0.99892 | 0.90909 | 0.99675 | 0.833333333 |
| 7     | 5  | 3  | 5  | 922 | 0.99144 | 0.00324 | 0.5      | 0.5     | 0.99676 | 0.625   | 0.99461 | 0.555555556 |
| 8     | 8  | 5  | 5  | 917 | 0.9893  | 0.00542 | 0.384615 | 0.61538 | 0.99458 | 0.61538 | 0.99458 | 0.615384615 |
| 9     | 8  | 2  | 6  | 919 | 0.99144 | 0.00217 | 0.428571 | 0.57143 | 0.99783 | 0.8     | 0.99351 | 0.666666667 |
| 10    | 5  | 5  | 1  | 924 | 0.99358 | 0.00538 | 0.166667 | 0.83333 | 0.99462 | 0.5     | 0.99892 | 0.625       |
| 11    | 8  | 3  | 7  | 917 | 0.9893  | 0.00326 | 0.466667 | 0.53333 | 0.99674 | 0.72727 | 0.99242 | 0.615384615 |
| 12    | 7  | 6  | 5  | 917 | 0.98824 | 0.0065  | 0.416667 | 0.58333 | 0.9935  | 0.53846 | 0.99458 | 0.56        |
| 13    | 4  | 7  | 3  | 921 | 0.9893  | 0.00754 | 0.428571 | 0.57143 | 0.99246 | 0.36364 | 0.99675 | 0.444444444 |
| 14    | 5  | 4  | 0  | 926 | 0.99572 | 0.0043  | 0        | 1       | 0.9957  | 0.55556 | 1       | 0.714285714 |
| 15    | 7  | 4  | 6  | 918 | 0.9893  | 0.00434 | 0.461538 | 0.53846 | 0.99566 | 0.63636 | 0.99351 | 0.583333333 |
| 16    | 9  | 2  | 2  | 922 | 0.99572 | 0.00216 | 0.181818 | 0.81818 | 0.99784 | 0.81818 | 0.99784 | 0.818181818 |
| 17    | 6  | 6  | 6  | 917 | 0.98717 | 0.0065  | 0.5      | 0.5     | 0.9935  | 0.5     | 0.9935  | 0.5         |
| 18    | 2  | 5  | 1  | 927 | 0.99358 | 0.00536 | 0.333333 | 0.66667 | 0.99464 | 0.28571 | 0.99892 | 0.4         |
| 19    | 4  | 5  | 1  | 925 | 0.99358 | 0.00538 | 0.2      | 0.8     | 0.99462 | 0.44444 | 0.99892 | 0.571428571 |
| 20    | 7  | 4  | 6  | 918 | 0.9893  | 0.00434 | 0.461538 | 0.53846 | 0.99566 | 0.63636 | 0.99351 | 0.583333333 |
| 21    | 1  | 8  | 1  | 925 | 0.99037 | 0.00857 | 0.5      | 0.5     | 0.99143 | 0.11111 | 0.99892 | 0.181818182 |
| 22    | 6  | 2  | 8  | 919 | 0.9893  | 0.00217 | 0.571429 | 0.42857 | 0.99783 | 0.75    | 0.99137 | 0.545454545 |
| 23    | 4  | 5  | 7  | 919 | 0.98717 | 0.00541 | 0.636364 | 0.36364 | 0.99459 | 0.44444 | 0.99244 | 0.4         |
| 24    | 4  | 4  | 5  | 922 | 0.99037 | 0.00432 | 0.555556 | 0.44444 | 0.99568 | 0.5     | 0.99461 | 0.470588235 |
| 25    | 3  | 7  | 4  | 921 | 0.98824 | 0.00754 | 0.571429 | 0.42857 | 0.99246 | 0.3     | 0.99568 | 0.352941176 |
| 26    | 5  | 5  | 9  | 916 | 0.98503 | 0.00543 | 0.642857 | 0.35714 | 0.99457 | 0.5     | 0.99027 | 0.416666667 |

# INCEPTION-V3- DATASET-2 (MODEL-5)

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR | TPR     | TNR     | PPV     | NPV     | F-MEASURE          |
|-------|----|----|----|-----|---------|---------|----------|---------|---------|---------|---------|--------------------|
| 27    | 6  | 3  | 2  | 924 | 0.99465 | 0.00324 | 0.25     | 0.75    | 0.99676 | 0.66667 | 0.99784 | 0.705882353        |
| 28    | 8  | 3  | 2  | 922 | 0.99465 | 0.00324 | 0.2      | 0.8     | 0.99676 | 0.72727 | 0.99784 | 0.761904762        |
| 29    | 7  | 2  | 3  | 923 | 0.99465 | 0.00216 | 0.3      | 0.7     | 0.99784 | 0.77778 | 0.99676 | 0.736842105        |
| 30    | 7  | 3  | 4  | 921 | 0.99251 | 0.00325 | 0.363636 | 0.63636 | 0.99675 | 0.7     | 0.99568 | 0.666666667        |
| 31    | 8  | 4  | 1  | 922 | 0.99465 | 0.00432 | 0.111111 | 0.88889 | 0.99568 | 0.66667 | 0.99892 | 0.761904762        |
| 32    | 7  | 3  | 11 | 914 | 0.98503 | 0.00327 | 0.611111 | 0.38889 | 0.99673 | 0.7     | 0.98811 | 0.5                |
| 33    | 5  | 4  | 2  | 924 | 0.99358 | 0.00431 | 0.285714 | 0.71429 | 0.99569 | 0.55556 | 0.99784 | 0.625              |
| 34    | 1  | 11 | 10 | 913 | 0.97754 | 0.0119  | 0.909091 | 0.09091 | 0.9881  | 0.08333 | 0.98917 | <b>0.086956522</b> |
| 35    | 8  | 5  | 4  | 918 | 0.99037 | 0.00542 | 0.333333 | 0.66667 | 0.99458 | 0.61538 | 0.99566 | 0.64               |
| 36    | 6  | 6  | 7  | 916 | 0.9861  | 0.00651 | 0.538462 | 0.46154 | 0.99349 | 0.5     | 0.99242 | 0.48               |
| 37    | 3  | 6  | 4  | 922 | 0.9893  | 0.00647 | 0.571429 | 0.42857 | 0.99353 | 0.33333 | 0.99568 | 0.375              |
| 38    | 9  | 2  | 6  | 918 | 0.99144 | 0.00217 | 0.4      | 0.6     | 0.99783 | 0.81818 | 0.99351 | 0.692307692        |
| 39    | 9  | 4  | 12 | 910 | 0.98289 | 0.00438 | 0.571429 | 0.42857 | 0.99562 | 0.69231 | 0.98698 | 0.529411765        |
| 40    | 6  | 7  | 5  | 917 | 0.98717 | 0.00758 | 0.454545 | 0.54545 | 0.99242 | 0.46154 | 0.99458 | 0.5                |
| 41    | 5  | 4  | 7  | 919 | 0.98824 | 0.00433 | 0.583333 | 0.41667 | 0.99567 | 0.55556 | 0.99244 | 0.476190476        |
| 42    | 2  | 10 | 6  | 917 | 0.98289 | 0.01079 | 0.75     | 0.25    | 0.98921 | 0.16667 | 0.9935  | 0.2                |
| 43    | 3  | 7  | 6  | 919 | 0.9861  | 0.00756 | 0.666667 | 0.33333 | 0.99244 | 0.3     | 0.99351 | 0.315789474        |
| 44    | 1  | 8  | 9  | 917 | 0.98182 | 0.00865 | 0.9      | 0.1     | 0.99135 | 0.11111 | 0.99028 | 0.105263158        |
| 45    | 3  | 6  | 2  | 924 | 0.99144 | 0.00645 | 0.4      | 0.6     | 0.99355 | 0.33333 | 0.99784 | 0.428571429        |
| 46    | 3  | 8  | 6  | 918 | 0.98503 | 0.00864 | 0.666667 | 0.33333 | 0.99136 | 0.27273 | 0.99351 | 0.3                |
| 47    | 7  | 5  | 7  | 916 | 0.98717 | 0.00543 | 0.5      | 0.5     | 0.99457 | 0.58333 | 0.99242 | 0.538461538        |
| 48    | 9  | 5  | 15 | 906 | 0.97861 | 0.00549 | 0.625    | 0.375   | 0.99451 | 0.64286 | 0.98371 | 0.473684211        |
| 49    | 3  | 6  | 3  | 923 | 0.99037 | 0.00646 | 0.5      | 0.5     | 0.99354 | 0.33333 | 0.99676 | 0.4                |
| 50    | 2  | 5  | 0  | 928 | 0.99465 | 0.00536 | 0        | 1       | 0.99464 | 0.28571 | 1       | 0.444444444        |
| 51    | 4  | 5  | 1  | 925 | 0.99358 | 0.00538 | 0.2      | 0.8     | 0.99462 | 0.44444 | 0.99892 | 0.571428571        |
| 52    | 1  | 8  | 3  | 923 | 0.98824 | 0.00859 | 0.75     | 0.25    | 0.99141 | 0.11111 | 0.99676 | 0.153846154        |
| 53    | 5  | 5  | 1  | 924 | 0.99358 | 0.00538 | 0.166667 | 0.83333 | 0.99462 | 0.5     | 0.99892 | 0.625              |

**INCEPTION-V3- DATASET-2 (MODEL-5)**

| <b>CLASS</b> | <b>TP</b> | <b>FP</b> | <b>FN</b> | <b>TN</b> | <b>ACC</b> | <b>FMR/FPR</b> | <b>FNMR/FNR</b> | <b>TPR</b> | <b>TNR</b> | <b>PPV</b> | <b>NPV</b> | <b>F-MEASURE</b> |
|--------------|-----------|-----------|-----------|-----------|------------|----------------|-----------------|------------|------------|------------|------------|------------------|
| 54           | 8         | 4         | 9         | 914       | 0.9861     | 0.00436        | 0.529412        | 0.47059    | 0.99564    | 0.66667    | 0.99025    | 0.551724138      |
| 55           | 5         | 2         | 4         | 924       | 0.99358    | 0.00216        | 0.444444        | 0.55556    | 0.99784    | 0.71429    | 0.99569    | 0.625            |
| 56           | 4         | 2         | 3         | 926       | 0.99465    | 0.00216        | 0.428571        | 0.57143    | 0.99784    | 0.66667    | 0.99677    | 0.615384615      |
| 57           | 4         | 2         | 3         | 926       | 0.99465    | 0.00216        | 0.428571        | 0.57143    | 0.99784    | 0.66667    | 0.99677    | 0.615384615      |
| 58           | 9         | 1         | 6         | 919       | 0.99251    | 0.00109        | 0.4             | 0.6        | 0.99891    | 0.9        | 0.99351    | 0.72             |
| 59           | 1         | 6         | 4         | 924       | 0.9893     | 0.00645        | 0.8             | 0.2        | 0.99355    | 0.14286    | 0.99569    | 0.166666667      |
| 60           | 11        | 0         | 5         | 919       | 0.99465    | 0              | 0.3125          | 0.6875     | 1          | 1          | 0.99459    | 0.814814815      |
| 61           | 7         | 4         | 3         | 921       | 0.99251    | 0.00432        | 0.3             | 0.7        | 0.99568    | 0.63636    | 0.99675    | 0.666666667      |
| 62           | 6         | 5         | 5         | 919       | 0.9893     | 0.00541        | 0.454545        | 0.54545    | 0.99459    | 0.54545    | 0.99459    | 0.545454545      |
| 63           | 5         | 4         | 8         | 918       | 0.98717    | 0.00434        | 0.615385        | 0.38462    | 0.99566    | 0.55556    | 0.99136    | 0.454545455      |
| 64           | 1         | 4         | 0         | 930       | 0.99572    | 0.00428        | 0               | 1          | 0.99572    | 0.2        | 1          | 0.333333333      |
| 65           | 10        | 3         | 1         | 921       | 0.99572    | 0.00325        | 0.090909        | 0.90909    | 0.99675    | 0.76923    | 0.99892    | 0.833333333      |
| 66           | 7         | 4         | 7         | 917       | 0.98824    | 0.00434        | 0.5             | 0.5        | 0.99566    | 0.63636    | 0.99242    | 0.56             |
| 67           | 1         | 6         | 3         | 925       | 0.99037    | 0.00644        | 0.75            | 0.25       | 0.99356    | 0.14286    | 0.99677    | 0.181818182      |
| 68           | 3         | 5         | 5         | 922       | 0.9893     | 0.00539        | 0.625           | 0.375      | 0.99461    | 0.375      | 0.99461    | 0.375            |
| 69           | 7         | 2         | 6         | 920       | 0.99144    | 0.00217        | 0.461538        | 0.53846    | 0.99783    | 0.77778    | 0.99352    | 0.636363636      |
| 70           | 6         | 3         | 2         | 924       | 0.99465    | 0.00324        | 0.25            | 0.75       | 0.99676    | 0.66667    | 0.99784    | 0.705882353      |
| 71           | 5         | 7         | 4         | 919       | 0.98824    | 0.00756        | 0.444444        | 0.55556    | 0.99244    | 0.41667    | 0.99567    | 0.476190476      |
| 72           | 9         | 5         | 4         | 917       | 0.99037    | 0.00542        | 0.307692        | 0.69231    | 0.99458    | 0.64286    | 0.99566    | 0.666666667      |
| 73           | 6         | 8         | 8         | 913       | 0.98289    | 0.00869        | 0.571429        | 0.42857    | 0.99131    | 0.42857    | 0.99131    | 0.428571429      |
| 74           | 9         | 5         | 6         | 915       | 0.98824    | 0.00543        | 0.4             | 0.6        | 0.99457    | 0.64286    | 0.99349    | 0.620689655      |
| 75           | 7         | 3         | 7         | 918       | 0.9893     | 0.00326        | 0.5             | 0.5        | 0.99674    | 0.7        | 0.99243    | 0.583333333      |
| 76           | 13        | 2         | 8         | 912       | 0.9893     | 0.00219        | 0.380952        | 0.61905    | 0.99781    | 0.86667    | 0.9913     | 0.722222222      |
| 77           | 12        | 1         | 3         | 919       | 0.99572    | 0.00109        | 0.2             | 0.8        | 0.99891    | 0.92308    | 0.99675    | 0.857142857      |
| 78           | 6         | 7         | 1         | 921       | 0.99144    | 0.00754        | 0.142857        | 0.85714    | 0.99246    | 0.46154    | 0.99892    | 0.6              |
| 79           | 9         | 3         | 3         | 920       | 0.99358    | 0.00325        | 0.25            | 0.75       | 0.99675    | 0.75       | 0.99675    | 0.75             |
| 80           | 9         | 4         | 5         | 917       | 0.99037    | 0.00434        | 0.357143        | 0.64286    | 0.99566    | 0.69231    | 0.99458    | 0.666666667      |

**INCEPTION-V3- DATASET-2 (MODEL-5)**

| <b>CLASS</b> | <b>TP</b> | <b>FP</b> | <b>FN</b> | <b>TN</b> | <b>ACC</b> | <b>FMR/FPR</b> | <b>FNMR/FNR</b> | <b>TPR</b> | <b>TNR</b> | <b>PPV</b> | <b>NPV</b> | <b>F-MEASURE</b> |
|--------------|-----------|-----------|-----------|-----------|------------|----------------|-----------------|------------|------------|------------|------------|------------------|
| 81           | 7         | 2         | 5         | 921       | 0.99251    | 0.00217        | 0.416667        | 0.58333    | 0.99783    | 0.77778    | 0.9946     | 0.666666667      |
| 82           | 5         | 2         | 1         | 927       | 0.99679    | 0.00215        | 0.166667        | 0.83333    | 0.99785    | 0.71429    | 0.99892    | 0.769230769      |
| 83           | 13        | 2         | 6         | 914       | 0.99144    | 0.00218        | 0.315789        | 0.68421    | 0.99782    | 0.86667    | 0.99348    | 0.764705882      |
| 84           | 5         | 7         | 1         | 922       | 0.99144    | 0.00753        | 0.166667        | 0.83333    | 0.99247    | 0.41667    | 0.99892    | 0.555555556      |
| 85           | 7         | 2         | 2         | 924       | 0.99572    | 0.00216        | 0.222222        | 0.77778    | 0.99784    | 0.77778    | 0.99784    | 0.777777778      |
| 86           | 4         | 3         | 6         | 922       | 0.99037    | 0.00324        | 0.6             | 0.4        | 0.99676    | 0.57143    | 0.99353    | 0.470588235      |
| 87           | 3         | 5         | 3         | 924       | 0.99144    | 0.00538        | 0.5             | 0.5        | 0.99462    | 0.375      | 0.99676    | 0.428571429      |
| 88           | 0         | 4         | 0         | 931       | 0.99572    | 0.00428        | $\infty$        | $\infty$   | 0.99572    | 0          | 1          | $\infty$         |
| 89           | 3         | 3         | 5         | 924       | 0.99144    | 0.00324        | 0.625           | 0.375      | 0.99676    | 0.5        | 0.99462    | 0.428571429      |
| 90           | 3         | 1         | 1         | 930       | 0.99786    | 0.00107        | 0.25            | 0.75       | 0.99893    | 0.75       | 0.99893    | 0.75             |
| 91           | 4         | 2         | 2         | 927       | 0.99572    | 0.00215        | 0.333333        | 0.66667    | 0.99785    | 0.66667    | 0.99785    | 0.666666667      |
| 92           | 5         | 3         | 1         | 926       | 0.99572    | 0.00323        | 0.166667        | 0.83333    | 0.99677    | 0.625      | 0.99892    | 0.714285714      |
| 93           | 1         | 2         | 0         | 932       | 0.99786    | 0.00214        | 0               | 1          | 0.99786    | 0.33333    | 1          | 0.5              |

**Appendix F: EXPERIMENTAL RESULTS OF INCEPTION-V3-D3****INCEPTION-V3- DATASET-3 (MODEL-6)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR  | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-----------|----------|---------|---------|---------|-------------|
| 1     | 4  | 10 | 12 | 909 | 0.97647 | 0.01088 | 0.75      | 0.25     | 0.98912 | 0.28571 | 0.98697 | 0.266666667 |
| 2     | 1  | 13 | 13 | 908 | 0.97219 | 0.01412 | 0.9285714 | 0.07143  | 0.98588 | 0.07143 | 0.98588 | 0.071428571 |
| 3     | 1  | 9  | 3  | 922 | 0.98717 | 0.00967 | 0.75      | 0.25     | 0.99033 | 0.1     | 0.99676 | 0.142857143 |
| 4     | 7  | 2  | 14 | 912 | 0.98289 | 0.00219 | 0.6666667 | 0.33333  | 0.99781 | 0.77778 | 0.98488 | 0.466666667 |
| 5     | 0  | 10 | 6  | 919 | 0.98289 | 0.01076 | 1         | 0        | 0.98924 | 0       | 0.99351 | $\infty$    |
| 6     | 8  | 3  | 19 | 905 | 0.97647 | 0.0033  | 0.7037037 | 0.2963   | 0.9967  | 0.72727 | 0.97944 | 0.421052632 |
| 7     | 0  | 8  | 0  | 927 | 0.99144 | 0.00856 | $\infty$  | $\infty$ | 0.99144 | 0       | 1       | $\infty$    |
| 8     | 4  | 9  | 13 | 909 | 0.97647 | 0.0098  | 0.7647059 | 0.23529  | 0.9902  | 0.30769 | 0.9859  | 0.266666667 |
| 9     | 4  | 6  | 3  | 922 | 0.99037 | 0.00647 | 0.4285714 | 0.57143  | 0.99353 | 0.4     | 0.99676 | 0.470588235 |
| 10    | 0  | 10 | 2  | 923 | 0.98717 | 0.01072 | 1         | 0        | 0.98928 | 0       | 0.99784 | $\infty$    |
| 11    | 1  | 10 | 3  | 921 | 0.9861  | 0.01074 | 0.75      | 0.25     | 0.98926 | 0.09091 | 0.99675 | 0.133333333 |
| 12    | 1  | 12 | 5  | 917 | 0.98182 | 0.01292 | 0.8333333 | 0.16667  | 0.98708 | 0.07692 | 0.99458 | 0.105263158 |
| 13    | 1  | 10 | 1  | 923 | 0.98824 | 0.01072 | 0.5       | 0.5      | 0.98928 | 0.09091 | 0.99892 | 0.153846154 |
| 14    | 2  | 7  | 1  | 925 | 0.99144 | 0.00751 | 0.3333333 | 0.66667  | 0.99249 | 0.22222 | 0.99892 | 0.333333333 |
| 15    | 6  | 5  | 8  | 916 | 0.9861  | 0.00543 | 0.5714286 | 0.42857  | 0.99457 | 0.54545 | 0.99134 | 0.48        |
| 16    | 9  | 2  | 5  | 919 | 0.99251 | 0.00217 | 0.3571429 | 0.64286  | 0.99783 | 0.81818 | 0.99459 | 0.72        |
| 17    | 2  | 10 | 6  | 917 | 0.98289 | 0.01079 | 0.75      | 0.25     | 0.98921 | 0.16667 | 0.9935  | 0.2         |
| 18    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$  | $\infty$ | 0.99251 | 0       | 1       | $\infty$    |
| 19    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1         | 0        | 0.99035 | 0       | 0.99784 | $\infty$    |
| 20    | 0  | 11 | 1  | 923 | 0.98717 | 0.01178 | 1         | 0        | 0.98822 | 0       | 0.99892 | $\infty$    |
| 21    | 2  | 7  | 2  | 924 | 0.99037 | 0.00752 | 0.5       | 0.5      | 0.99248 | 0.22222 | 0.99784 | 0.307692308 |
| 22    | 3  | 5  | 13 | 914 | 0.98075 | 0.00544 | 0.8125    | 0.1875   | 0.99456 | 0.375   | 0.98598 | 0.25        |
| 23    | 2  | 7  | 2  | 924 | 0.99037 | 0.00752 | 0.5       | 0.5      | 0.99248 | 0.22222 | 0.99784 | 0.307692308 |
| 24    | 3  | 5  | 1  | 926 | 0.99358 | 0.00537 | 0.25      | 0.75     | 0.99463 | 0.375   | 0.99892 | 0.5         |
| 25    | 0  | 10 | 2  | 923 | 0.98717 | 0.01072 | 1         | 0        | 0.98928 | 0       | 0.99784 | $\infty$    |
| 26    | 3  | 7  | 5  | 920 | 0.98717 | 0.00755 | 0.625     | 0.375    | 0.99245 | 0.3     | 0.99459 | 0.333333333 |

**INCEPTION-V3- DATASET-3 (MODEL-6)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR  | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-----------|----------|---------|---------|---------|-------------|
| 27    | 0  | 9  | 3  | 923 | 0.98717 | 0.00966 | 1         | 0        | 0.99034 | 0       | 0.99676 | $\infty$    |
| 28    | 7  | 4  | 20 | 904 | 0.97433 | 0.00441 | 0.7407407 | 0.25926  | 0.99559 | 0.63636 | 0.97835 | 0.368421053 |
| 29    | 6  | 5  | 25 | 899 | 0.96791 | 0.00553 | 0.8064516 | 0.19355  | 0.99447 | 0.54545 | 0.97294 | 0.285714286 |
| 30    | 1  | 9  | 14 | 911 | 0.9754  | 0.00978 | 0.9333333 | 0.06667  | 0.99022 | 0.1     | 0.98486 | 0.08        |
| 31    | 3  | 9  | 17 | 906 | 0.97219 | 0.00984 | 0.85      | 0.15     | 0.99016 | 0.25    | 0.98158 | 0.1875      |
| 32    | 1  | 9  | 10 | 915 | 0.97968 | 0.00974 | 0.9090909 | 0.09091  | 0.99026 | 0.1     | 0.98919 | 0.095238095 |
| 33    | 2  | 7  | 10 | 916 | 0.98182 | 0.00758 | 0.8333333 | 0.16667  | 0.99242 | 0.22222 | 0.9892  | 0.19047619  |
| 34    | 0  | 12 | 4  | 919 | 0.98289 | 0.01289 | 1         | 0        | 0.98711 | 0       | 0.99567 | $\infty$    |
| 35    | 5  | 8  | 9  | 913 | 0.98182 | 0.00869 | 0.6428571 | 0.35714  | 0.99131 | 0.38462 | 0.99024 | 0.37037037  |
| 36    | 3  | 9  | 19 | 904 | 0.97005 | 0.00986 | 0.8636364 | 0.13636  | 0.99014 | 0.25    | 0.97941 | 0.176470588 |
| 37    | 3  | 6  | 2  | 924 | 0.99144 | 0.00645 | 0.4       | 0.6      | 0.99355 | 0.33333 | 0.99784 | 0.428571429 |
| 38    | 0  | 11 | 5  | 919 | 0.98289 | 0.01183 | 1         | 0        | 0.98817 | 0       | 0.99459 | $\infty$    |
| 39    | 3  | 10 | 34 | 888 | 0.95294 | 0.01114 | 0.9189189 | 0.08108  | 0.98886 | 0.23077 | 0.96312 | 0.12        |
| 40    | 4  | 9  | 2  | 920 | 0.98824 | 0.00969 | 0.3333333 | 0.66667  | 0.99031 | 0.30769 | 0.99783 | 0.421052632 |
| 41    | 6  | 3  | 14 | 912 | 0.98182 | 0.00328 | 0.7       | 0.3      | 0.99672 | 0.66667 | 0.98488 | 0.413793103 |
| 42    | 2  | 10 | 7  | 916 | 0.98182 | 0.0108  | 0.7777778 | 0.22222  | 0.9892  | 0.16667 | 0.99242 | 0.19047619  |
| 43    | 0  | 10 | 15 | 910 | 0.97326 | 0.01087 | 1         | 0        | 0.98913 | 0       | 0.98378 | $\infty$    |
| 44    | 0  | 9  | 5  | 921 | 0.98503 | 0.00968 | 1         | 0        | 0.99032 | 0       | 0.9946  | $\infty$    |
| 45    | 0  | 9  | 0  | 926 | 0.99037 | 0.00963 | $\infty$  | $\infty$ | 0.99037 | 0       | 1       | $\infty$    |
| 46    | 1  | 10 | 1  | 923 | 0.98824 | 0.01072 | 0.5       | 0.5      | 0.98928 | 0.09091 | 0.99892 | 0.153846154 |
| 47    | 4  | 8  | 24 | 899 | 0.96578 | 0.00882 | 0.8571429 | 0.14286  | 0.99118 | 0.33333 | 0.974   | 0.2         |
| 48    | 4  | 10 | 19 | 902 | 0.96898 | 0.01096 | 0.826087  | 0.17391  | 0.98904 | 0.28571 | 0.97937 | 0.216216216 |
| 49    | 2  | 7  | 6  | 920 | 0.9861  | 0.00755 | 0.75      | 0.25     | 0.99245 | 0.22222 | 0.99352 | 0.235294118 |
| 50    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$  | $\infty$ | 0.99251 | 0       | 1       | $\infty$    |
| 51    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1         | 0        | 0.99035 | 0       | 0.99784 | $\infty$    |
| 52    | 0  | 9  | 3  | 923 | 0.98717 | 0.00966 | 1         | 0        | 0.99034 | 0       | 0.99676 | $\infty$    |
| 53    | 3  | 7  | 11 | 914 | 0.98075 | 0.0076  | 0.7857143 | 0.21429  | 0.9924  | 0.3     | 0.98811 | 0.25        |

**INCEPTION-V3- DATASET-3 (MODEL-6)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR  | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-----------|----------|---------|---------|---------|-------------|
| 54    | 2  | 10 | 5  | 918 | 0.98396 | 0.01078 | 0.7142857 | 0.28571  | 0.98922 | 0.16667 | 0.99458 | 0.210526316 |
| 55    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$  | $\infty$ | 0.99251 | 0       | 1       | $\infty$    |
| 56    | 1  | 5  | 3  | 926 | 0.99144 | 0.00537 | 0.75      | 0.25     | 0.99463 | 0.16667 | 0.99677 | 0.2         |
| 57    | 1  | 5  | 0  | 929 | 0.99465 | 0.00535 | 0         | 1        | 0.99465 | 0.16667 | 1       | 0.285714286 |
| 58    | 3  | 7  | 13 | 912 | 0.97861 | 0.00762 | 0.8125    | 0.1875   | 0.99238 | 0.3     | 0.98595 | 0.230769231 |
| 59    | 0  | 7  | 1  | 927 | 0.99144 | 0.00749 | 1         | 0        | 0.99251 | 0       | 0.99892 | $\infty$    |
| 60    | 4  | 7  | 27 | 897 | 0.96364 | 0.00774 | 0.8709677 | 0.12903  | 0.99226 | 0.36364 | 0.97078 | 0.19047619  |
| 61    | 4  | 7  | 17 | 907 | 0.97433 | 0.00766 | 0.8095238 | 0.19048  | 0.99234 | 0.36364 | 0.9816  | 0.25        |
| 62    | 3  | 8  | 8  | 916 | 0.98289 | 0.00866 | 0.7272727 | 0.27273  | 0.99134 | 0.27273 | 0.99134 | 0.272727273 |
| 63    | 2  | 7  | 3  | 923 | 0.9893  | 0.00753 | 0.6       | 0.4      | 0.99247 | 0.22222 | 0.99676 | 0.285714286 |
| 64    | 0  | 5  | 0  | 930 | 0.99465 | 0.00535 | $\infty$  | $\infty$ | 0.99465 | 0       | 1       | $\infty$    |
| 65    | 4  | 9  | 6  | 916 | 0.98396 | 0.00973 | 0.6       | 0.4      | 0.99027 | 0.30769 | 0.99349 | 0.347826087 |
| 66    | 4  | 7  | 9  | 915 | 0.98289 | 0.00759 | 0.6923077 | 0.30769  | 0.99241 | 0.36364 | 0.99026 | 0.333333333 |
| 67    | 0  | 7  | 2  | 926 | 0.99037 | 0.0075  | 1         | 0        | 0.9925  | 0       | 0.99784 | $\infty$    |
| 68    | 0  | 8  | 0  | 927 | 0.99144 | 0.00856 | $\infty$  | $\infty$ | 0.99144 | 0       | 1       | $\infty$    |
| 69    | 1  | 8  | 7  | 919 | 0.98396 | 0.00863 | 0.875     | 0.125    | 0.99137 | 0.11111 | 0.99244 | 0.117647059 |
| 70    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1         | 0        | 0.99035 | 0       | 0.99784 | $\infty$    |
| 71    | 2  | 10 | 6  | 917 | 0.98289 | 0.01079 | 0.75      | 0.25     | 0.98921 | 0.16667 | 0.9935  | 0.2         |
| 72    | 3  | 11 | 13 | 908 | 0.97433 | 0.01197 | 0.8125    | 0.1875   | 0.98803 | 0.21429 | 0.98588 | 0.2         |
| 73    | 2  | 12 | 7  | 914 | 0.97968 | 0.01296 | 0.7777778 | 0.22222  | 0.98704 | 0.14286 | 0.9924  | 0.173913043 |
| 74    | 6  | 8  | 17 | 904 | 0.97326 | 0.00877 | 0.7391304 | 0.26087  | 0.99123 | 0.42857 | 0.98154 | 0.324324324 |
| 75    | 0  | 10 | 7  | 918 | 0.98182 | 0.01078 | 1         | 0        | 0.98922 | 0       | 0.99243 | $\infty$    |
| 76    | 2  | 3  | 7  | 923 | 0.9893  | 0.00324 | 0.7777778 | 0.22222  | 0.99676 | 0.4     | 0.99247 | 0.285714286 |
| 77    | 7  | 6  | 14 | 908 | 0.97861 | 0.00656 | 0.6666667 | 0.33333  | 0.99344 | 0.53846 | 0.98482 | 0.411764706 |
| 78    | 4  | 9  | 13 | 909 | 0.97647 | 0.0098  | 0.7647059 | 0.23529  | 0.9902  | 0.30769 | 0.9859  | 0.266666667 |
| 79    | 4  | 8  | 14 | 909 | 0.97647 | 0.00872 | 0.7777778 | 0.22222  | 0.99128 | 0.33333 | 0.98483 | 0.266666667 |
| 80    | 5  | 8  | 12 | 910 | 0.97861 | 0.00871 | 0.7058824 | 0.29412  | 0.99129 | 0.38462 | 0.98698 | 0.333333333 |



**INCEPTION-V3- DATASET-3 (MODEL-6)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR  | TPR      | TNR     | PPV     | NPV     | F-MEASURE          |
|-------|----|----|----|-----|---------|---------|-----------|----------|---------|---------|---------|--------------------|
| 81    | 1  | 8  | 1  | 925 | 0.99037 | 0.00857 | 0.5       | 0.5      | 0.99143 | 0.11111 | 0.99892 | 0.181818182        |
| 82    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$  | $\infty$ | 0.99251 | 0       | 1       | $\infty$           |
| 83    | 11 | 4  | 2  | 918 | 0.99358 | 0.00434 | 0.1538462 | 0.84615  | 0.99566 | 0.73333 | 0.99783 | 0.785714286        |
| 84    | 11 | 1  | 8  | 915 | 0.99037 | 0.00109 | 0.4210526 | 0.57895  | 0.99891 | 0.91667 | 0.99133 | 0.709677419        |
| 85    | 2  | 1  | 3  | 929 | 0.99572 | 0.00108 | 0.6       | 0.4      | 0.99892 | 0.66667 | 0.99678 | 0.5                |
| 86    | 5  | 2  | 5  | 923 | 0.99251 | 0.00216 | 0.5       | 0.5      | 0.99784 | 0.71429 | 0.99461 | 0.588235294        |
| 87    | 2  | 6  | 3  | 924 | 0.99037 | 0.00645 | 0.6       | 0.4      | 0.99355 | 0.25    | 0.99676 | 0.307692308        |
| 88    | 0  | 4  | 0  | 931 | 0.99572 | 0.00428 | $\infty$  | $\infty$ | 0.99572 | 0       | 1       | $\infty$           |
| 89    | 0  | 6  | 8  | 921 | 0.98503 | 0.00647 | 1         | 0        | 0.99353 | 0       | 0.99139 | $\infty$           |
| 90    | 0  | 4  | 1  | 930 | 0.99465 | 0.00428 | 1         | 0        | 0.99572 | 0       | 0.99893 | $\infty$           |
| 91    | 3  | 3  | 0  | 929 | 0.99679 | 0.00322 | 0         | 1        | 0.99678 | 0.5     | 1       | <b>0.666666667</b> |
| 92    | 3  | 5  | 3  | 924 | 0.99144 | 0.00538 | 0.5       | 0.5      | 0.99462 | 0.375   | 0.99676 | 0.428571429        |
| 93    | 0  | 3  | 0  | 932 | 0.99679 | 0.00321 | $\infty$  | $\infty$ | 0.99679 | 0       | 1       | $\infty$           |

**Appendix G: EXPERIMENTAL RESULTS OF RESNET-D1****RESNET- DATASET-1 (MODEL-1)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 1     | 1  | 3  | 7  | 297 | 0.96753 | 0.01    | 0.875       | 0.125    | 0.99    | 0.25    | 0.97697 | 0.166666667 |
| 2     | 1  | 3  | 10 | 294 | 0.95779 | 0.0101  | 0.909090909 | 0.09091  | 0.9899  | 0.25    | 0.96711 | 0.133333333 |
| 3     | 2  | 1  | 0  | 305 | 0.99675 | 0.00327 | 0           | 1        | 0.99673 | 0.66667 | 1       | 0.8         |
| 4     | 1  | 3  | 0  | 304 | 0.99026 | 0.00977 | 0           | 1        | 0.99023 | 0.25    | 1       | 0.4         |
| 5     | 0  | 3  | 0  | 305 | 0.99026 | 0.00974 | $\infty$    | $\infty$ | 0.99026 | 0       | 1       | $\infty$    |
| 6     | 3  | 1  | 1  | 303 | 0.99351 | 0.00329 | 0.25        | 0.75     | 0.99671 | 0.75    | 0.99671 | 0.75        |
| 7     | 2  | 1  | 1  | 304 | 0.99351 | 0.00328 | 0.333333333 | 0.66667  | 0.99672 | 0.66667 | 0.99672 | 0.666666667 |
| 8     | 0  | 4  | 4  | 300 | 0.97403 | 0.01316 | 1           | 0        | 0.98684 | 0       | 0.98684 | $\infty$    |
| 9     | 1  | 2  | 3  | 302 | 0.98377 | 0.00658 | 0.75        | 0.25     | 0.99342 | 0.33333 | 0.99016 | 0.285714286 |
| 10    | 1  | 2  | 2  | 303 | 0.98701 | 0.00656 | 0.666666667 | 0.33333  | 0.99344 | 0.33333 | 0.99344 | 0.333333333 |
| 11    | 1  | 3  | 1  | 303 | 0.98701 | 0.0098  | 0.5         | 0.5      | 0.9902  | 0.25    | 0.99671 | 0.333333333 |
| 12    | 0  | 4  | 1  | 303 | 0.98377 | 0.01303 | 1           | 0        | 0.98697 | 0       | 0.99671 | $\infty$    |
| 13    | 0  | 4  | 4  | 300 | 0.97403 | 0.01316 | 1           | 0        | 0.98684 | 0       | 0.98684 | $\infty$    |
| 14    | 0  | 3  | 4  | 301 | 0.97727 | 0.00987 | 1           | 0        | 0.99013 | 0       | 0.98689 | $\infty$    |
| 15    | 2  | 2  | 8  | 296 | 0.96753 | 0.00671 | 0.8         | 0.2      | 0.99329 | 0.5     | 0.97368 | 0.285714286 |
| 16    | 2  | 2  | 3  | 301 | 0.98377 | 0.0066  | 0.6         | 0.4      | 0.9934  | 0.5     | 0.99013 | 0.444444444 |
| 17    | 0  | 4  | 4  | 300 | 0.97403 | 0.01316 | 1           | 0        | 0.98684 | 0       | 0.98684 | $\infty$    |
| 18    | 0  | 2  | 2  | 304 | 0.98701 | 0.00654 | 1           | 0        | 0.99346 | 0       | 0.99346 | $\infty$    |
| 19    | 0  | 3  | 2  | 303 | 0.98377 | 0.0098  | 1           | 0        | 0.9902  | 0       | 0.99344 | $\infty$    |
| 20    | 0  | 4  | 4  | 300 | 0.97403 | 0.01316 | 1           | 0        | 0.98684 | 0       | 0.98684 | $\infty$    |
| 21    | 0  | 3  | 1  | 304 | 0.98701 | 0.00977 | 1           | 0        | 0.99023 | 0       | 0.99672 | $\infty$    |
| 22    | 0  | 3  | 1  | 304 | 0.98701 | 0.00977 | 1           | 0        | 0.99023 | 0       | 0.99672 | $\infty$    |
| 23    | 0  | 3  | 5  | 300 | 0.97403 | 0.0099  | 1           | 0        | 0.9901  | 0       | 0.98361 | $\infty$    |
| 24    | 1  | 2  | 4  | 301 | 0.98052 | 0.0066  | 0.8         | 0.2      | 0.9934  | 0.33333 | 0.98689 | 0.25        |
| 25    | 1  | 2  | 2  | 303 | 0.98701 | 0.00656 | 0.666666667 | 0.33333  | 0.99344 | 0.33333 | 0.99344 | 0.333333333 |
| 26    | 0  | 3  | 3  | 302 | 0.98052 | 0.00984 | 1           | 0        | 0.99016 | 0       | 0.99016 | $\infty$    |

**RESNET- DATASET-1 (MODEL-1)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 27    | 0  | 3  | 0  | 305 | 0.99026 | 0.00974 | $\infty$    | $\infty$ | 0.99026 | 0       | 1       | $\infty$    |
| 28    | 1  | 3  | 3  | 301 | 0.98052 | 0.00987 | 0.75        | 0.25     | 0.99013 | 0.25    | 0.99013 | 0.25        |
| 29    | 1  | 3  | 3  | 301 | 0.98052 | 0.00987 | 0.75        | 0.25     | 0.99013 | 0.25    | 0.99013 | 0.25        |
| 30    | 0  | 3  | 2  | 303 | 0.98377 | 0.0098  | 1           | 0        | 0.9902  | 0       | 0.99344 | $\infty$    |
| 31    | 1  | 3  | 4  | 300 | 0.97727 | 0.0099  | 0.8         | 0.2      | 0.9901  | 0.25    | 0.98684 | 0.222222222 |
| 32    | 0  | 3  | 6  | 299 | 0.97078 | 0.00993 | 1           | 0        | 0.99007 | 0       | 0.98033 | $\infty$    |
| 33    | 0  | 3  | 8  | 297 | 0.96429 | 0.01    | 1           | 0        | 0.99    | 0       | 0.97377 | $\infty$    |
| 34    | 2  | 2  | 5  | 299 | 0.97727 | 0.00664 | 0.714285714 | 0.28571  | 0.99336 | 0.5     | 0.98355 | 0.363636364 |
| 35    | 0  | 4  | 8  | 296 | 0.96104 | 0.01333 | 1           | 0        | 0.98667 | 0       | 0.97368 | $\infty$    |
| 36    | 0  | 4  | 3  | 301 | 0.97727 | 0.01311 | 1           | 0        | 0.98689 | 0       | 0.99013 | $\infty$    |
| 37    | 0  | 3  | 2  | 303 | 0.98377 | 0.0098  | 1           | 0        | 0.9902  | 0       | 0.99344 | $\infty$    |
| 38    | 0  | 4  | 2  | 302 | 0.98052 | 0.01307 | 1           | 0        | 0.98693 | 0       | 0.99342 | $\infty$    |
| 39    | 0  | 4  | 2  | 302 | 0.98052 | 0.01307 | 1           | 0        | 0.98693 | 0       | 0.99342 | $\infty$    |
| 40    | 1  | 3  | 1  | 303 | 0.98701 | 0.0098  | 0.5         | 0.5      | 0.9902  | 0.25    | 0.99671 | 0.333333333 |
| 41    | 1  | 2  | 2  | 303 | 0.98701 | 0.00656 | 0.666666667 | 0.33333  | 0.99344 | 0.33333 | 0.99344 | 0.333333333 |
| 42    | 0  | 4  | 4  | 300 | 0.97403 | 0.01316 | 1           | 0        | 0.98684 | 0       | 0.98684 | $\infty$    |
| 43    | 1  | 2  | 5  | 300 | 0.97727 | 0.00662 | 0.833333333 | 0.16667  | 0.99338 | 0.33333 | 0.98361 | 0.222222222 |
| 44    | 0  | 3  | 7  | 298 | 0.96753 | 0.00997 | 1           | 0        | 0.99003 | 0       | 0.97705 | $\infty$    |
| 45    | 0  | 3  | 3  | 302 | 0.98052 | 0.00984 | 1           | 0        | 0.99016 | 0       | 0.99016 | $\infty$    |
| 46    | 1  | 3  | 2  | 302 | 0.98377 | 0.00984 | 0.666666667 | 0.33333  | 0.99016 | 0.25    | 0.99342 | 0.285714286 |
| 47    | 0  | 4  | 0  | 304 | 0.98701 | 0.01299 | $\infty$    | $\infty$ | 0.98701 | 0       | 1       | $\infty$    |
| 48    | 3  | 2  | 2  | 301 | 0.98701 | 0.0066  | 0.4         | 0.6      | 0.9934  | 0.6     | 0.9934  | 0.6         |
| 49    | 0  | 3  | 4  | 301 | 0.97727 | 0.00987 | 1           | 0        | 0.99013 | 0       | 0.98689 | $\infty$    |
| 50    | 0  | 2  | 0  | 306 | 0.99351 | 0.00649 | $\infty$    | $\infty$ | 0.99351 | 0       | 1       | $\infty$    |
| 51    | 0  | 3  | 2  | 303 | 0.98377 | 0.0098  | 1           | 0        | 0.9902  | 0       | 0.99344 | $\infty$    |
| 52    | 0  | 3  | 3  | 302 | 0.98052 | 0.00984 | 1           | 0        | 0.99016 | 0       | 0.99016 | $\infty$    |
| 53    | 0  | 3  | 1  | 304 | 0.98701 | 0.00977 | 1           | 0        | 0.99023 | 0       | 0.99672 | $\infty$    |

**RESNET- DATASET-1 (MODEL-1)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 54    | 0  | 4  | 2  | 302 | 0.98052 | 0.01307 | 1           | 0        | 0.98693 | 0       | 0.99342 | $\infty$    |
| 55    | 0  | 2  | 2  | 304 | 0.98701 | 0.00654 | 1           | 0        | 0.99346 | 0       | 0.99346 | $\infty$    |
| 56    | 0  | 2  | 2  | 304 | 0.98701 | 0.00654 | 1           | 0        | 0.99346 | 0       | 0.99346 | $\infty$    |
| 57    | 2  | 0  | 0  | 306 | 1       | 0       | 0           | 1        | 1       | 1       | 1       | 1           |
| 58    | 1  | 2  | 3  | 302 | 0.98377 | 0.00658 | 0.75        | 0.25     | 0.99342 | 0.33333 | 0.99016 | 0.285714286 |
| 59    | 0  | 2  | 3  | 303 | 0.98377 | 0.00656 | 1           | 0        | 0.99344 | 0       | 0.9902  | $\infty$    |
| 60    | 1  | 3  | 4  | 300 | 0.97727 | 0.0099  | 0.8         | 0.2      | 0.9901  | 0.25    | 0.98684 | 0.222222222 |
| 61    | 3  | 1  | 0  | 304 | 0.99675 | 0.00328 | 0           | 1        | 0.99672 | 0.75    | 1       | 0.857142857 |
| 62    | 1  | 3  | 0  | 304 | 0.99026 | 0.00977 | 0           | 1        | 0.99023 | 0.25    | 1       | 0.4         |
| 63    | 1  | 2  | 6  | 299 | 0.97403 | 0.00664 | 0.857142857 | 0.14286  | 0.99336 | 0.33333 | 0.98033 | 0.2         |
| 64    | 0  | 2  | 0  | 306 | 0.99351 | 0.00649 | $\infty$    | $\infty$ | 0.99351 | 0       | 1       | $\infty$    |
| 65    | 0  | 4  | 4  | 300 | 0.97403 | 0.01316 | 1           | 0        | 0.98684 | 0       | 0.98684 | $\infty$    |
| 66    | 1  | 3  | 4  | 300 | 0.97727 | 0.0099  | 0.8         | 0.2      | 0.9901  | 0.25    | 0.98684 | 0.222222222 |
| 67    | 0  | 2  | 0  | 306 | 0.99351 | 0.00649 | $\infty$    | $\infty$ | 0.99351 | 0       | 1       | $\infty$    |
| 68    | 0  | 3  | 1  | 304 | 0.98701 | 0.00977 | 1           | 0        | 0.99023 | 0       | 0.99672 | $\infty$    |
| 69    | 2  | 1  | 0  | 305 | 0.99675 | 0.00327 | 0           | 1        | 0.99673 | 0.66667 | 1       | 0.8         |
| 70    | 2  | 1  | 2  | 303 | 0.99026 | 0.00329 | 0.5         | 0.5      | 0.99671 | 0.66667 | 0.99344 | 0.571428571 |
| 71    | 1  | 3  | 3  | 301 | 0.98052 | 0.00987 | 0.75        | 0.25     | 0.99013 | 0.25    | 0.99013 | 0.25        |
| 72    | 2  | 2  | 2  | 302 | 0.98701 | 0.00658 | 0.5         | 0.5      | 0.99342 | 0.5     | 0.99342 | 0.5         |
| 73    | 1  | 4  | 4  | 299 | 0.97403 | 0.0132  | 0.8         | 0.2      | 0.9868  | 0.2     | 0.9868  | 0.2         |
| 74    | 0  | 5  | 2  | 301 | 0.97727 | 0.01634 | 1           | 0        | 0.98366 | 0       | 0.9934  | $\infty$    |
| 75    | 1  | 2  | 2  | 303 | 0.98701 | 0.00656 | 0.666666667 | 0.33333  | 0.99344 | 0.33333 | 0.99344 | 0.333333333 |
| 76    | 2  | 3  | 5  | 298 | 0.97403 | 0.00997 | 0.714285714 | 0.28571  | 0.99003 | 0.4     | 0.9835  | 0.333333333 |
| 77    | 2  | 2  | 1  | 303 | 0.99026 | 0.00656 | 0.333333333 | 0.66667  | 0.99344 | 0.5     | 0.99671 | 0.571428571 |
| 78    | 1  | 3  | 3  | 301 | 0.98052 | 0.00987 | 0.75        | 0.25     | 0.99013 | 0.25    | 0.99013 | 0.25        |
| 79    | 3  | 1  | 4  | 300 | 0.98377 | 0.00332 | 0.571428571 | 0.42857  | 0.99668 | 0.75    | 0.98684 | 0.545454545 |
| 80    | 3  | 1  | 2  | 302 | 0.99026 | 0.0033  | 0.4         | 0.6      | 0.9967  | 0.75    | 0.99342 | 0.666666667 |

**RESNET- DATASET-1 (MODEL-1)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 81    | 1  | 2  | 0  | 305 | 0.99351 | 0.00651 | 0           | 1        | 0.99349 | 0.33333 | 1       | 0.5         |
| 82    | 0  | 2  | 0  | 306 | 0.99351 | 0.00649 | $\infty$    | $\infty$ | 0.99351 | 0       | 1       | $\infty$    |
| 83    | 4  | 1  | 2  | 301 | 0.99026 | 0.00331 | 0.333333333 | 0.66667  | 0.99669 | 0.8     | 0.9934  | 0.727272727 |
| 84    | 1  | 3  | 2  | 302 | 0.98377 | 0.00984 | 0.666666667 | 0.33333  | 0.99016 | 0.25    | 0.99342 | 0.285714286 |
| 85    | 2  | 1  | 2  | 303 | 0.99026 | 0.00329 | 0.5         | 0.5      | 0.99671 | 0.66667 | 0.99344 | 0.571428571 |
| 86    | 2  | 0  | 1  | 305 | 0.99675 | 0       | 0.333333333 | 0.66667  | 1       | 1       | 0.99673 | 0.8         |
| 87    | 0  | 3  | 0  | 305 | 0.99026 | 0.00974 | $\infty$    | $\infty$ | 0.99026 | 0       | 1       | $\infty$    |
| 88    | 1  | 0  | 1  | 306 | 0.99675 | 0       | 0.5         | 0.5      | 1       | 1       | 0.99674 | 0.666666667 |
| 89    | 1  | 1  | 1  | 305 | 0.99351 | 0.00327 | 0.5         | 0.5      | 0.99673 | 0.5     | 0.99673 | 0.5         |
| 90    | 1  | 0  | 0  | 307 | 1       | 0       | 0           | 1        | 1       | 1       | 1       | 1           |
| 91    | 1  | 1  | 0  | 306 | 0.99675 | 0.00326 | 0           | 1        | 0.99674 | 0.5     | 1       | 0.666666667 |
| 92    | 1  | 2  | 1  | 304 | 0.99026 | 0.00654 | 0.5         | 0.5      | 0.99346 | 0.33333 | 0.99672 | 0.4         |
| 93    | 0  | 1  | 0  | 307 | 0.99675 | 0.00325 | $\infty$    | $\infty$ | 0.99675 | 0       | 1       | $\infty$    |

**Appendix H: EXPERIMENTAL RESULTS OF RESNET-D2****RESNET- DATASET-2 (MODEL-2)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR   | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|------------|---------|---------|---------|---------|-------------|
| 1     | 13 | 1  | 0  | 921 | 0.99893 | 0.00108 | 0          | 1       | 0.99892 | 0.92857 | 1       | 0.962962963 |
| 2     | 11 | 3  | 2  | 919 | 0.99465 | 0.00325 | 0.15384615 | 0.84615 | 0.99675 | 0.78571 | 0.99783 | 0.814814815 |
| 3     | 7  | 3  | 0  | 925 | 0.99679 | 0.00323 | 0          | 1       | 0.99677 | 0.7     | 1       | 0.823529412 |
| 4     | 11 | 0  | 1  | 923 | 0.99893 | 0       | 0.08333333 | 0.91667 | 1       | 1       | 0.99892 | 0.956521739 |
| 5     | 9  | 1  | 0  | 925 | 0.99893 | 0.00108 | 0          | 1       | 0.99892 | 0.9     | 1       | 0.947368421 |
| 6     | 11 | 0  | 0  | 924 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 7     | 8  | 0  | 1  | 926 | 0.99893 | 0       | 0.11111111 | 0.88889 | 1       | 1       | 0.99892 | 0.941176471 |
| 8     | 12 | 1  | 1  | 921 | 0.99786 | 0.00108 | 0.07692308 | 0.92308 | 0.99892 | 0.92308 | 0.99892 | 0.923076923 |
| 9     | 9  | 1  | 1  | 924 | 0.99786 | 0.00108 | 0.1        | 0.9     | 0.99892 | 0.9     | 0.99892 | 0.9         |
| 10    | 10 | 0  | 3  | 922 | 0.99679 | 0       | 0.23076923 | 0.76923 | 1       | 1       | 0.99676 | 0.869565217 |
| 11    | 11 | 0  | 1  | 923 | 0.99893 | 0       | 0.08333333 | 0.91667 | 1       | 1       | 0.99892 | 0.956521739 |
| 12    | 9  | 4  | 3  | 919 | 0.99251 | 0.00433 | 0.25       | 0.75    | 0.99567 | 0.69231 | 0.99675 | 0.72        |
| 13    | 9  | 2  | 1  | 923 | 0.99679 | 0.00216 | 0.1        | 0.9     | 0.99784 | 0.81818 | 0.99892 | 0.857142857 |
| 14    | 7  | 2  | 0  | 926 | 0.99786 | 0.00216 | 0          | 1       | 0.99784 | 0.77778 | 1       | 0.875       |
| 15    | 11 | 0  | 2  | 922 | 0.99786 | 0       | 0.15384615 | 0.84615 | 1       | 1       | 0.99784 | 0.916666667 |
| 16    | 8  | 3  | 0  | 924 | 0.99679 | 0.00324 | 0          | 1       | 0.99676 | 0.72727 | 1       | 0.842105263 |
| 17    | 11 | 1  | 2  | 921 | 0.99679 | 0.00108 | 0.15384615 | 0.84615 | 0.99892 | 0.91667 | 0.99783 | 0.88        |
| 18    | 6  | 1  | 3  | 925 | 0.99572 | 0.00108 | 0.33333333 | 0.66667 | 0.99892 | 0.85714 | 0.99677 | 0.75        |
| 19    | 8  | 1  | 2  | 924 | 0.99679 | 0.00108 | 0.2        | 0.8     | 0.99892 | 0.88889 | 0.99784 | 0.842105263 |
| 20    | 8  | 3  | 4  | 920 | 0.99251 | 0.00325 | 0.33333333 | 0.66667 | 0.99675 | 0.72727 | 0.99567 | 0.695652174 |
| 21    | 8  | 1  | 0  | 926 | 0.99893 | 0.00108 | 0          | 1       | 0.99892 | 0.88889 | 1       | 0.941176471 |
| 22    | 8  | 0  | 2  | 925 | 0.99786 | 0       | 0.2        | 0.8     | 1       | 1       | 0.99784 | 0.888888889 |
| 23    | 8  | 1  | 5  | 921 | 0.99358 | 0.00108 | 0.38461538 | 0.61538 | 0.99892 | 0.88889 | 0.9946  | 0.727272727 |
| 24    | 7  | 1  | 2  | 925 | 0.99679 | 0.00108 | 0.22222222 | 0.77778 | 0.99892 | 0.875   | 0.99784 | 0.823529412 |
| 25    | 8  | 2  | 3  | 922 | 0.99465 | 0.00216 | 0.27272727 | 0.72727 | 0.99784 | 0.8     | 0.99676 | 0.761904762 |
| 26    | 10 | 0  | 5  | 920 | 0.99465 | 0       | 0.33333333 | 0.66667 | 1       | 1       | 0.99459 | 0.8         |

**RESNET- DATASET-2 (MODEL-2)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR   | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|------------|---------|---------|---------|---------|-------------|
| 27    | 8  | 1  | 0  | 926 | 0.99893 | 0.00108 | 0          | 1       | 0.99892 | 0.88889 | 1       | 0.941176471 |
| 28    | 11 | 0  | 2  | 922 | 0.99786 | 0       | 0.15384615 | 0.84615 | 1       | 1       | 0.99784 | 0.916666667 |
| 29    | 10 | 1  | 3  | 921 | 0.99572 | 0.00108 | 0.23076923 | 0.76923 | 0.99892 | 0.90909 | 0.99675 | 0.833333333 |
| 30    | 10 | 0  | 3  | 922 | 0.99679 | 0       | 0.23076923 | 0.76923 | 1       | 1       | 0.99676 | 0.869565217 |
| 31    | 10 | 2  | 1  | 922 | 0.99679 | 0.00216 | 0.09090909 | 0.90909 | 0.99784 | 0.83333 | 0.99892 | 0.869565217 |
| 32    | 10 | 0  | 1  | 924 | 0.99893 | 0       | 0.09090909 | 0.90909 | 1       | 1       | 0.99892 | 0.952380952 |
| 33    | 5  | 4  | 0  | 926 | 0.99572 | 0.0043  | 0          | 1       | 0.9957  | 0.55556 | 1       | 0.714285714 |
| 34    | 6  | 6  | 1  | 922 | 0.99251 | 0.00647 | 0.14285714 | 0.85714 | 0.99353 | 0.5     | 0.99892 | 0.631578947 |
| 35    | 10 | 3  | 1  | 921 | 0.99572 | 0.00325 | 0.09090909 | 0.90909 | 0.99675 | 0.76923 | 0.99892 | 0.833333333 |
| 36    | 12 | 0  | 2  | 921 | 0.99786 | 0       | 0.14285714 | 0.85714 | 1       | 1       | 0.99783 | 0.923076923 |
| 37    | 9  | 0  | 1  | 925 | 0.99893 | 0       | 0.1        | 0.9     | 1       | 1       | 0.99892 | 0.947368421 |
| 38    | 10 | 1  | 3  | 921 | 0.99572 | 0.00108 | 0.23076923 | 0.76923 | 0.99892 | 0.90909 | 0.99675 | 0.833333333 |
| 39    | 10 | 3  | 1  | 921 | 0.99572 | 0.00325 | 0.09090909 | 0.90909 | 0.99675 | 0.76923 | 0.99892 | 0.833333333 |
| 40    | 12 | 1  | 4  | 918 | 0.99465 | 0.00109 | 0.25       | 0.75    | 0.99891 | 0.92308 | 0.99566 | 0.827586207 |
| 41    | 7  | 2  | 0  | 926 | 0.99786 | 0.00216 | 0          | 1       | 0.99784 | 0.77778 | 1       | 0.875       |
| 42    | 5  | 7  | 3  | 920 | 0.9893  | 0.00755 | 0.375      | 0.625   | 0.99245 | 0.41667 | 0.99675 | 0.5         |
| 43    | 9  | 2  | 4  | 920 | 0.99358 | 0.00217 | 0.30769231 | 0.69231 | 0.99783 | 0.81818 | 0.99567 | 0.75        |
| 44    | 8  | 1  | 6  | 920 | 0.99251 | 0.00109 | 0.42857143 | 0.57143 | 0.99891 | 0.88889 | 0.99352 | 0.695652174 |
| 45    | 9  | 0  | 0  | 926 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 46    | 9  | 2  | 2  | 922 | 0.99572 | 0.00216 | 0.18181818 | 0.81818 | 0.99784 | 0.81818 | 0.99784 | 0.818181818 |
| 47    | 11 | 1  | 2  | 921 | 0.99679 | 0.00108 | 0.15384615 | 0.84615 | 0.99892 | 0.91667 | 0.99783 | 0.88        |
| 48    | 13 | 1  | 5  | 916 | 0.99358 | 0.00109 | 0.27777778 | 0.72222 | 0.99891 | 0.92857 | 0.99457 | 0.8125      |
| 49    | 5  | 4  | 2  | 924 | 0.99358 | 0.00431 | 0.28571429 | 0.71429 | 0.99569 | 0.55556 | 0.99784 | 0.625       |
| 50    | 5  | 2  | 0  | 928 | 0.99786 | 0.00215 | 0          | 1       | 0.99785 | 0.71429 | 1       | 0.833333333 |
| 51    | 9  | 0  | 2  | 924 | 0.99786 | 0       | 0.18181818 | 0.81818 | 1       | 1       | 0.99784 | 0.9         |
| 52    | 6  | 3  | 2  | 924 | 0.99465 | 0.00324 | 0.25       | 0.75    | 0.99676 | 0.66667 | 0.99784 | 0.705882353 |
| 53    | 10 | 0  | 0  | 925 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |

**RESNET- DATASET-2 (MODEL-2)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR   | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|------------|---------|---------|---------|---------|-------------|
| 54    | 11 | 1  | 3  | 920 | 0.99572 | 0.00109 | 0.21428571 | 0.78571 | 0.99891 | 0.91667 | 0.99675 | 0.846153846 |
| 55    | 7  | 0  | 1  | 927 | 0.99893 | 0       | 0.125      | 0.875   | 1       | 1       | 0.99892 | 0.933333333 |
| 56    | 6  | 0  | 0  | 929 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 57    | 6  | 0  | 2  | 927 | 0.99786 | 0       | 0.25       | 0.75    | 1       | 1       | 0.99785 | 0.857142857 |
| 58    | 10 | 0  | 0  | 925 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 59    | 7  | 0  | 0  | 928 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 60    | 11 | 0  | 0  | 924 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 61    | 7  | 3  | 0  | 925 | 0.99679 | 0.00323 | 0          | 1       | 0.99677 | 0.7     | 1       | 0.823529412 |
| 62    | 8  | 3  | 1  | 923 | 0.99572 | 0.00324 | 0.11111111 | 0.88889 | 0.99676 | 0.72727 | 0.99892 | 0.8         |
| 63    | 7  | 2  | 4  | 922 | 0.99358 | 0.00216 | 0.36363636 | 0.63636 | 0.99784 | 0.77778 | 0.99568 | 0.7         |
| 64    | 2  | 3  | 0  | 930 | 0.99679 | 0.00322 | 0          | 1       | 0.99678 | 0.4     | 1       | 0.571428571 |
| 65    | 10 | 3  | 3  | 919 | 0.99358 | 0.00325 | 0.23076923 | 0.76923 | 0.99675 | 0.76923 | 0.99675 | 0.769230769 |
| 66    | 8  | 3  | 1  | 923 | 0.99572 | 0.00324 | 0.11111111 | 0.88889 | 0.99676 | 0.72727 | 0.99892 | 0.8         |
| 67    | 6  | 1  | 2  | 926 | 0.99679 | 0.00108 | 0.25       | 0.75    | 0.99892 | 0.85714 | 0.99784 | 0.8         |
| 68    | 8  | 0  | 1  | 926 | 0.99893 | 0       | 0.11111111 | 0.88889 | 1       | 1       | 0.99892 | 0.941176471 |
| 69    | 9  | 0  | 0  | 926 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 70    | 7  | 2  | 0  | 926 | 0.99786 | 0.00216 | 0          | 1       | 0.99784 | 0.77778 | 1       | 0.875       |
| 71    | 6  | 6  | 1  | 922 | 0.99251 | 0.00647 | 0.14285714 | 0.85714 | 0.99353 | 0.5     | 0.99892 | 0.631578947 |
| 72    | 14 | 0  | 2  | 919 | 0.99786 | 0       | 0.125      | 0.875   | 1       | 1       | 0.99783 | 0.933333333 |
| 73    | 11 | 3  | 3  | 918 | 0.99358 | 0.00326 | 0.21428571 | 0.78571 | 0.99674 | 0.78571 | 0.99674 | 0.785714286 |
| 74    | 13 | 1  | 1  | 920 | 0.99786 | 0.00109 | 0.07142857 | 0.92857 | 0.99891 | 0.92857 | 0.99891 | 0.928571429 |
| 75    | 10 | 0  | 0  | 925 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 76    | 15 | 0  | 0  | 920 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 77    | 13 | 0  | 1  | 921 | 0.99893 | 0       | 0.07142857 | 0.92857 | 1       | 1       | 0.99892 | 0.962962963 |
| 78    | 12 | 1  | 0  | 922 | 0.99893 | 0.00108 | 0          | 1       | 0.99892 | 0.92308 | 1       | 0.96        |
| 79    | 9  | 3  | 0  | 923 | 0.99679 | 0.00324 | 0          | 1       | 0.99676 | 0.75    | 1       | 0.857142857 |
| 80    | 10 | 3  | 0  | 922 | 0.99679 | 0.00324 | 0          | 1       | 0.99676 | 0.76923 | 1       | 0.869565217 |



**RESNET- DATASET-2 (MODEL-2)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR   | TPR     | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|------------|---------|---------|---------|---------|-------------|
| 81    | 9  | 0  | 1  | 925 | 0.99893 | 0       | 0.1        | 0.9     | 1       | 1       | 0.99892 | 0.947368421 |
| 82    | 7  | 0  | 0  | 928 | 1       | 0       | 0          | 1       | 1       | 1       | 1       | 1           |
| 83    | 15 | 0  | 2  | 918 | 0.99786 | 0       | 0.11764706 | 0.88235 | 1       | 1       | 0.99783 | 0.9375      |
| 84    | 9  | 3  | 0  | 923 | 0.99679 | 0.00324 | 0          | 1       | 0.99676 | 0.75    | 1       | 0.857142857 |
| 85    | 8  | 1  | 1  | 925 | 0.99786 | 0.00108 | 0.11111111 | 0.88889 | 0.99892 | 0.88889 | 0.99892 | 0.888888889 |
| 86    | 4  | 3  | 4  | 924 | 0.99251 | 0.00324 | 0.5        | 0.5     | 0.99676 | 0.57143 | 0.99569 | 0.533333333 |
| 87    | 4  | 4  | 3  | 924 | 0.99251 | 0.00431 | 0.42857143 | 0.57143 | 0.99569 | 0.5     | 0.99676 | 0.533333333 |
| 88    | 0  | 4  | 4  | 927 | 0.99144 | 0.0043  | 1          | 0       | 0.9957  | 0       | 0.9957  | $\infty$    |
| 89    | 3  | 3  | 6  | 923 | 0.99037 | 0.00324 | 0.66666667 | 0.33333 | 0.99676 | 0.5     | 0.99354 | 0.4         |
| 90    | 3  | 1  | 1  | 930 | 0.99786 | 0.00107 | 0.25       | 0.75    | 0.99893 | 0.75    | 0.99893 | 0.75        |
| 91    | 4  | 2  | 0  | 929 | 0.99786 | 0.00215 | 0          | 1       | 0.99785 | 0.66667 | 1       | 0.8         |
| 92    | 5  | 3  | 2  | 925 | 0.99465 | 0.00323 | 0.28571429 | 0.71429 | 0.99677 | 0.625   | 0.99784 | 0.666666667 |
| 93    | 2  | 1  | 0  | 932 | 0.99893 | 0.00107 | 0          | 1       | 0.99893 | 0.66667 | 1       | 0.8         |

**Appendix I: EXPERIMENTAL RESULTS OF RESNET-D3****RESNET- DATASET-3 (MODEL-3)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 1     | 4  | 10 | 12 | 909 | 0.97647 | 0.01088 | 0.75        | 0.25     | 0.54545 | 0.28571 | 0.98697 | 0.266666667 |
| 2     | 1  | 13 | 13 | 908 | 0.97219 | 0.01412 | 0.928571429 | 0.07143  | 0.5     | 0.07143 | 0.98588 | 0.071428571 |
| 3     | 1  | 9  | 3  | 922 | 0.98717 | 0.00967 | 0.75        | 0.25     | 0.25    | 0.1     | 0.99676 | 0.142857143 |
| 4     | 7  | 4  | 14 | 910 | 0.98075 | 0.00438 | 0.666666667 | 0.33333  | 0.77778 | 0.63636 | 0.98485 | 0.4375      |
| 5     | 0  | 10 | 6  | 919 | 0.98289 | 0.01076 | 1           | 0        | 0.375   | 0       | 0.99351 | $\infty$    |
| 6     | 8  | 3  | 19 | 905 | 0.97647 | 0.0033  | 0.703703704 | 0.2963   | 0.86364 | 0.72727 | 0.97944 | 0.421052632 |
| 7     | 0  | 8  | 0  | 927 | 0.99144 | 0.00856 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 8     | 4  | 9  | 13 | 909 | 0.97647 | 0.0098  | 0.764705882 | 0.23529  | 0.59091 | 0.30769 | 0.9859  | 0.266666667 |
| 9     | 4  | 6  | 3  | 922 | 0.99037 | 0.00647 | 0.428571429 | 0.57143  | 0.33333 | 0.4     | 0.99676 | 0.470588235 |
| 10    | 0  | 10 | 2  | 923 | 0.98717 | 0.01072 | 1           | 0        | 0.16667 | 0       | 0.99784 | $\infty$    |
| 11    | 1  | 10 | 3  | 921 | 0.9861  | 0.01074 | 0.75        | 0.25     | 0.23077 | 0.09091 | 0.99675 | 0.133333333 |
| 12    | 1  | 12 | 5  | 917 | 0.98182 | 0.01292 | 0.833333333 | 0.16667  | 0.29412 | 0.07692 | 0.99458 | 0.105263158 |
| 13    | 1  | 10 | 1  | 923 | 0.98824 | 0.01072 | 0.5         | 0.5      | 0.09091 | 0.09091 | 0.99892 | 0.153846154 |
| 14    | 2  | 7  | 1  | 925 | 0.99144 | 0.00751 | 0.333333333 | 0.66667  | 0.125   | 0.22222 | 0.99892 | 0.333333333 |
| 15    | 6  | 5  | 8  | 916 | 0.9861  | 0.00543 | 0.571428571 | 0.42857  | 0.61538 | 0.54545 | 0.99134 | 0.48        |
| 16    | 9  | 2  | 5  | 919 | 0.99251 | 0.00217 | 0.357142857 | 0.64286  | 0.71429 | 0.81818 | 0.99459 | 0.72        |
| 17    | 2  | 10 | 6  | 917 | 0.98289 | 0.01079 | 0.75        | 0.25     | 0.375   | 0.16667 | 0.9935  | 0.2         |
| 18    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 19    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1           | 0        | 0.18182 | 0       | 0.99784 | $\infty$    |
| 20    | 0  | 11 | 1  | 923 | 0.98717 | 0.01178 | 1           | 0        | 0.08333 | 0       | 0.99892 | $\infty$    |
| 21    | 2  | 7  | 2  | 924 | 0.99037 | 0.00752 | 0.5         | 0.5      | 0.22222 | 0.22222 | 0.99784 | 0.307692308 |
| 22    | 3  | 5  | 13 | 914 | 0.98075 | 0.00544 | 0.8125      | 0.1875   | 0.72222 | 0.375   | 0.98598 | 0.25        |
| 23    | 0  | 9  | 4  | 922 | 0.9861  | 0.00967 | 1           | 0        | 0.30769 | 0       | 0.99568 | $\infty$    |
| 24    | 2  | 6  | 1  | 926 | 0.99251 | 0.00644 | 0.333333333 | 0.66667  | 0.14286 | 0.25    | 0.99892 | 0.363636364 |
| 25    | 0  | 10 | 2  | 923 | 0.98717 | 0.01072 | 1           | 0        | 0.16667 | 0       | 0.99784 | $\infty$    |
| 26    | 3  | 7  | 5  | 920 | 0.98717 | 0.00755 | 0.625       | 0.375    | 0.41667 | 0.3     | 0.99459 | 0.333333333 |

**RESNET- DATASET-3 (MODEL-3)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 27    | 0  | 9  | 3  | 923 | 0.98717 | 0.00966 | 1           | 0        | 0.25    | 0       | 0.99676 | $\infty$    |
| 28    | 7  | 4  | 20 | 904 | 0.97433 | 0.00441 | 0.740740741 | 0.25926  | 0.83333 | 0.63636 | 0.97835 | 0.368421053 |
| 29    | 6  | 5  | 24 | 900 | 0.96898 | 0.00552 | 0.8         | 0.2      | 0.82759 | 0.54545 | 0.97403 | 0.292682927 |
| 30    | 1  | 9  | 14 | 911 | 0.9754  | 0.00978 | 0.933333333 | 0.06667  | 0.6087  | 0.1     | 0.98486 | 0.08        |
| 31    | 3  | 9  | 17 | 906 | 0.97219 | 0.00984 | 0.85        | 0.15     | 0.65385 | 0.25    | 0.98158 | 0.1875      |
| 32    | 1  | 9  | 10 | 915 | 0.97968 | 0.00974 | 0.909090909 | 0.09091  | 0.52632 | 0.1     | 0.98919 | 0.095238095 |
| 33    | 2  | 7  | 10 | 916 | 0.98182 | 0.00758 | 0.833333333 | 0.16667  | 0.58824 | 0.22222 | 0.9892  | 0.19047619  |
| 34    | 0  | 12 | 4  | 919 | 0.98289 | 0.01289 | 1           | 0        | 0.25    | 0       | 0.99567 | $\infty$    |
| 35    | 5  | 8  | 9  | 913 | 0.98182 | 0.00869 | 0.642857143 | 0.35714  | 0.52941 | 0.38462 | 0.99024 | 0.37037037  |
| 36    | 3  | 9  | 19 | 904 | 0.97005 | 0.00986 | 0.863636364 | 0.13636  | 0.67857 | 0.25    | 0.97941 | 0.176470588 |
| 37    | 3  | 6  | 2  | 924 | 0.99144 | 0.00645 | 0.4         | 0.6      | 0.25    | 0.33333 | 0.99784 | 0.428571429 |
| 38    | 0  | 11 | 5  | 919 | 0.98289 | 0.01183 | 1           | 0        | 0.3125  | 0       | 0.99459 | $\infty$    |
| 39    | 3  | 10 | 34 | 888 | 0.95294 | 0.01114 | 0.918918919 | 0.08108  | 0.77273 | 0.23077 | 0.96312 | 0.12        |
| 40    | 4  | 9  | 4  | 918 | 0.9861  | 0.00971 | 0.5         | 0.5      | 0.30769 | 0.30769 | 0.99566 | 0.380952381 |
| 41    | 6  | 3  | 14 | 912 | 0.98182 | 0.00328 | 0.7         | 0.3      | 0.82353 | 0.66667 | 0.98488 | 0.413793103 |
| 42    | 2  | 10 | 7  | 916 | 0.98182 | 0.0108  | 0.777777778 | 0.22222  | 0.41176 | 0.16667 | 0.99242 | 0.19047619  |
| 43    | 0  | 10 | 15 | 910 | 0.97326 | 0.01087 | 1           | 0        | 0.6     | 0       | 0.98378 | $\infty$    |
| 44    | 0  | 9  | 5  | 921 | 0.98503 | 0.00968 | 1           | 0        | 0.35714 | 0       | 0.9946  | $\infty$    |
| 45    | 0  | 9  | 0  | 926 | 0.99037 | 0.00963 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 46    | 1  | 10 | 1  | 923 | 0.98824 | 0.01072 | 0.5         | 0.5      | 0.09091 | 0.09091 | 0.99892 | 0.153846154 |
| 47    | 4  | 8  | 24 | 899 | 0.96578 | 0.00882 | 0.857142857 | 0.14286  | 0.75    | 0.33333 | 0.974   | 0.2         |
| 48    | 4  | 10 | 19 | 902 | 0.96898 | 0.01096 | 0.826086957 | 0.17391  | 0.65517 | 0.28571 | 0.97937 | 0.216216216 |
| 49    | 2  | 7  | 6  | 920 | 0.9861  | 0.00755 | 0.75        | 0.25     | 0.46154 | 0.22222 | 0.99352 | 0.235294118 |
| 50    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 51    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1           | 0        | 0.18182 | 0       | 0.99784 | $\infty$    |
| 52    | 0  | 9  | 3  | 923 | 0.98717 | 0.00966 | 1           | 0        | 0.25    | 0       | 0.99676 | $\infty$    |
| 53    | 3  | 7  | 11 | 914 | 0.98075 | 0.0076  | 0.785714286 | 0.21429  | 0.61111 | 0.3     | 0.98811 | 0.25        |

**RESNET- DATASET-3 (MODEL-3)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 54    | 2  | 10 | 5  | 918 | 0.98396 | 0.01078 | 0.714285714 | 0.28571  | 0.33333 | 0.16667 | 0.99458 | 0.210526316 |
| 55    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 56    | 1  | 5  | 3  | 926 | 0.99144 | 0.00537 | 0.75        | 0.25     | 0.375   | 0.16667 | 0.99677 | 0.2         |
| 57    | 1  | 5  | 0  | 929 | 0.99465 | 0.00535 | 0           | 1        | 0       | 0.16667 | 1       | 0.285714286 |
| 58    | 3  | 7  | 13 | 912 | 0.97861 | 0.00762 | 0.8125      | 0.1875   | 0.65    | 0.3     | 0.98595 | 0.230769231 |
| 59    | 0  | 7  | 1  | 927 | 0.99144 | 0.00749 | 1           | 0        | 0.125   | 0       | 0.99892 | $\infty$    |
| 60    | 4  | 7  | 27 | 897 | 0.96364 | 0.00774 | 0.870967742 | 0.12903  | 0.79412 | 0.36364 | 0.97078 | 0.19047619  |
| 61    | 4  | 7  | 17 | 907 | 0.97433 | 0.00766 | 0.80952381  | 0.19048  | 0.70833 | 0.36364 | 0.9816  | 0.25        |
| 62    | 3  | 8  | 8  | 916 | 0.98289 | 0.00866 | 0.727272727 | 0.27273  | 0.5     | 0.27273 | 0.99134 | 0.272727273 |
| 63    | 2  | 7  | 3  | 923 | 0.9893  | 0.00753 | 0.6         | 0.4      | 0.3     | 0.22222 | 0.99676 | 0.285714286 |
| 64    | 0  | 5  | 0  | 930 | 0.99465 | 0.00535 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 65    | 4  | 9  | 7  | 915 | 0.98289 | 0.00974 | 0.636363636 | 0.36364  | 0.4375  | 0.30769 | 0.99241 | 0.333333333 |
| 66    | 4  | 7  | 9  | 915 | 0.98289 | 0.00759 | 0.692307692 | 0.30769  | 0.5625  | 0.36364 | 0.99026 | 0.333333333 |
| 67    | 0  | 7  | 2  | 926 | 0.99037 | 0.0075  | 1           | 0        | 0.22222 | 0       | 0.99784 | $\infty$    |
| 68    | 0  | 8  | 0  | 927 | 0.99144 | 0.00856 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 69    | 1  | 8  | 7  | 919 | 0.98396 | 0.00863 | 0.875       | 0.125    | 0.46667 | 0.11111 | 0.99244 | 0.117647059 |
| 70    | 0  | 9  | 2  | 924 | 0.98824 | 0.00965 | 1           | 0        | 0.18182 | 0       | 0.99784 | $\infty$    |
| 71    | 2  | 10 | 6  | 917 | 0.98289 | 0.01079 | 0.75        | 0.25     | 0.375   | 0.16667 | 0.9935  | 0.2         |
| 72    | 3  | 11 | 13 | 908 | 0.97433 | 0.01197 | 0.8125      | 0.1875   | 0.54167 | 0.21429 | 0.98588 | 0.2         |
| 73    | 2  | 12 | 7  | 914 | 0.97968 | 0.01296 | 0.777777778 | 0.22222  | 0.36842 | 0.14286 | 0.9924  | 0.173913043 |
| 74    | 6  | 8  | 17 | 904 | 0.97326 | 0.00877 | 0.739130435 | 0.26087  | 0.68    | 0.42857 | 0.98154 | 0.324324324 |
| 75    | 0  | 10 | 7  | 918 | 0.98182 | 0.01078 | 1           | 0        | 0.41176 | 0       | 0.99243 | $\infty$    |
| 76    | 8  | 7  | 21 | 899 | 0.97005 | 0.00773 | 0.724137931 | 0.27586  | 0.75    | 0.53333 | 0.97717 | 0.363636364 |
| 77    | 7  | 6  | 17 | 905 | 0.9754  | 0.00659 | 0.708333333 | 0.29167  | 0.73913 | 0.53846 | 0.98156 | 0.378378378 |
| 78    | 4  | 9  | 13 | 909 | 0.97647 | 0.0098  | 0.764705882 | 0.23529  | 0.59091 | 0.30769 | 0.9859  | 0.266666667 |
| 79    | 4  | 8  | 14 | 909 | 0.97647 | 0.00872 | 0.777777778 | 0.22222  | 0.63636 | 0.33333 | 0.98483 | 0.266666667 |
| 80    | 5  | 5  | 12 | 913 | 0.98182 | 0.00545 | 0.705882353 | 0.29412  | 0.70588 | 0.5     | 0.98703 | 0.37037037  |

**RESNET- DATASET-3 (MODEL-3)**

| CLASS | TP | FP | FN | TN  | ACC     | FMR/FPR | FNMR/FNR    | TPR      | TNR     | PPV     | NPV     | F-MEASURE   |
|-------|----|----|----|-----|---------|---------|-------------|----------|---------|---------|---------|-------------|
| 81    | 1  | 8  | 1  | 925 | 0.99037 | 0.00857 | 0.5         | 0.5      | 0.11111 | 0.11111 | 0.99892 | 0.181818182 |
| 82    | 0  | 7  | 0  | 928 | 0.99251 | 0.00749 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 83    | 11 | 4  | 2  | 918 | 0.99358 | 0.00434 | 0.153846154 | 0.84615  | 0.33333 | 0.73333 | 0.99783 | 0.785714286 |
| 84    | 11 | 1  | 8  | 915 | 0.99037 | 0.00109 | 0.421052632 | 0.57895  | 0.88889 | 0.91667 | 0.99133 | 0.709677419 |
| 85    | 8  | 1  | 13 | 913 | 0.98503 | 0.00109 | 0.619047619 | 0.38095  | 0.92857 | 0.88889 | 0.98596 | 0.533333333 |
| 86    | 5  | 2  | 5  | 923 | 0.99251 | 0.00216 | 0.5         | 0.5      | 0.71429 | 0.71429 | 0.99461 | 0.588235294 |
| 87    | 2  | 6  | 3  | 924 | 0.99037 | 0.00645 | 0.6         | 0.4      | 0.33333 | 0.25    | 0.99676 | 0.307692308 |
| 88    | 0  | 4  | 0  | 931 | 0.99572 | 0.00428 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |
| 89    | 0  | 6  | 8  | 921 | 0.98503 | 0.00647 | 1           | 0        | 0.57143 | 0       | 0.99139 | $\infty$    |
| 90    | 0  | 4  | 1  | 930 | 0.99465 | 0.00428 | 1           | 0        | 0.2     | 0       | 0.99893 | $\infty$    |
| 91    | 3  | 3  | 0  | 929 | 0.99679 | 0.00322 | 0           | 1        | 0       | 0.5     | 1       | 0.666666667 |
| 92    | 3  | 5  | 3  | 924 | 0.99144 | 0.00538 | 0.5         | 0.5      | 0.375   | 0.375   | 0.99676 | 0.428571429 |
| 93    | 0  | 3  | 0  | 932 | 0.99679 | 0.00321 | $\infty$    | $\infty$ | 0       | 0       | 1       | $\infty$    |

