

Lampiran 1 Black box Testing

No	Skenario Pengujian	Test Case	Hasil yang Diharapkan	Hasil Pengujian	Kesimpulan
1	Klik mulai analisis tanpa menginput file	Menekan button mulai analisis tanpa menginput file	Sistem akan menampilkan pesan "File belum diinput"	Sesuai Harapan	Valid
2	Klik mulai analisis dengan format file yang salah	Menginput file dengan format doc	Sistem akan menampilkan pesan "Format file salah"	Sesuai Harapan	Valid
3	Klik mulai analisis dengan zip yang didalamnya tidak ada deretan frame.	Menginput file zip yang didalamnya merupakan hanya file doc.	Sistem akan menampilkan pesan "Isi File tidak valid"	Sesuai Harapan	Valid
4	Klik mulai analisis dengan file yang valid.	Menginput file zip yang didalamnya merupakan deretan	Sistem akan mengarahkan user ke halaman Hasil analisis yang berisi	Sesuai Harapan	Valid

No	Skenario Pengujian	Test Case	Hasil yang Diharapkan	Hasil Pengujian	Kesimpulan
		frame-frame tari Bali.	detail profil tari dan kesimpulan.		

Lampiran 2 White Box Testing

No	Nama Algoritma	Algoritma	Hasil yang diharapkan	Kesimpulan
1	Cek Ekstensi	1. Mengecek string format dengan 'rar atau 'zip'	Fungsi mengembalikan nilai 1	Valid
2	Mengubah nama File	1. Menyimpan nama file yang baru ke variabel 2. Menyimpan path file lama ke variabel 3. Menyimpan path file baru ke variable 4. Mengubah path lama dengan baru menggunakan os.rename	Fungsi mengembalikan path file	Valid
3	Ekstrak file	1. Melakukan ekstraksi file menggunakan patoolib atau pyunpack library pada python dan menyimpannya di folder result.	Fungsi akan mencetak proses dan path tempat file-file disimpan	Valid

No	Nama Algoritma	Algoritma	Hasil yang diharapkan	Kesimpulan
4	Mengecek hasil Ekstrak	<ol style="list-style-type: none"> 1. Menyimpan jumlah folder atau file didalam hasil unzip sebelumnya 2. Jika 1 akan menghitung jumlah file didalamnya. 3. Selain itu akan menghitung jumlah file di hasil unzip sebelumnya 	Fungsi mengembalikan nilai 0	Valid
5	Resize	<ol style="list-style-type: none"> 1. Mengubah ukuran citra menjadi 1920x1080 	File citra memiliki ukuran 1920x1080	Valid
6	Cropping	<ol style="list-style-type: none"> 1. Menginisialisasi ukuran citra 2. Mengubah ukuran citra sesuai inisialisasi 	Folder yang didalamnya terdapat folder test yang mengandung file yang sudah di potong	Valid
7	Klasifikasi	<ol style="list-style-type: none"> 1. Menginisialisasi ukuran citra 2. Menginisialisasi label 3. Melakukan prediksi menggunakan model CNN yang telah dibuat sebelumnya 	Fungsi mengembalikan deretan kode	Valid
8	Analisis Pola	<ol style="list-style-type: none"> 1. Membuat pohon string 2. Mencari pola sesuai kriteria 	Fungsi mengembalikan nilai setiap kriteria dan nilai likertnya	Valid

No	Nama Algoritma	Algoritma	Hasil yang diharapkan	Kesimpulan
		3. Menginisialisasi pola karakteristik koreografi		

```
==
hasil return check Extention
1
==

==
hasil return rename rar
test2-sukses-iscampurtoctfd0JIn.zip dan test2-sukses-iscampurtopvUYKC9.zip
==

==

hasil ekstrak file
patool: Extracting test2-sukses-iscampurtoctfd0JIn.zip ...
patool: ... test2-sukses-iscampurtoctfd0JIn.zip extracted to `result/test2-sukses-iscampurtoctfd0JIn'.
==

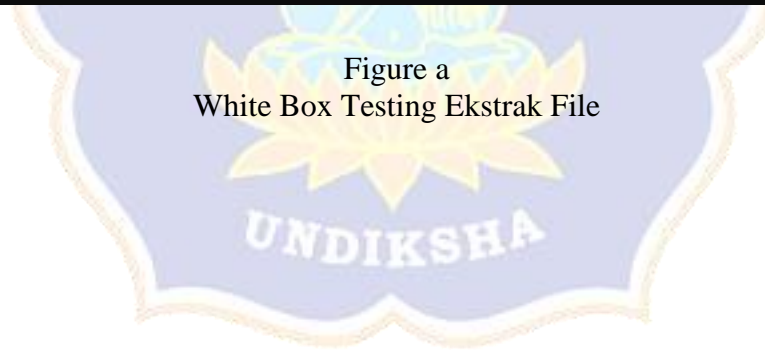
==

hasil ekstrak file
patool: Extracting test2-sukses-iscampurtopvUYKC9.zip ...
patool: ... test2-sukses-iscampurtopvUYKC9.zip extracted to `result/test2-sukses-iscampurtopvUYKC9'.
==

==

hasil return check hasil unzip
0 dan 0
==
```

Figure a
White Box Testing Ekstrak File



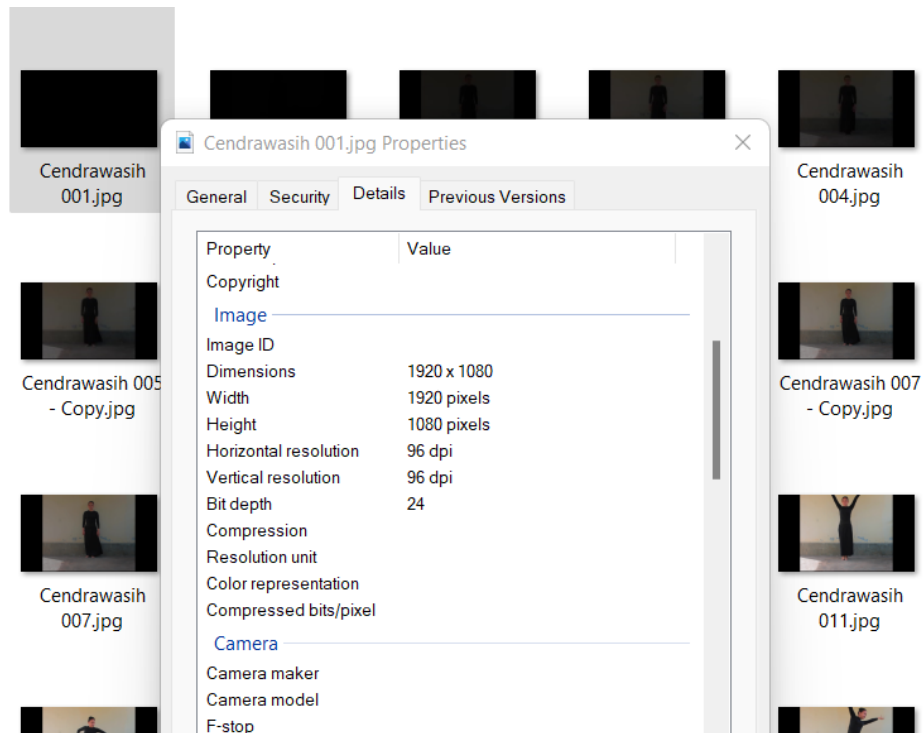
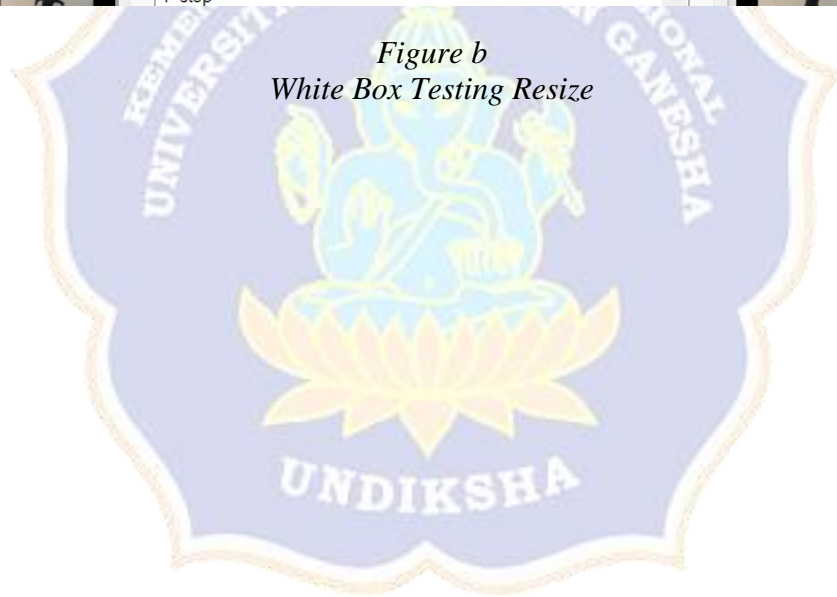


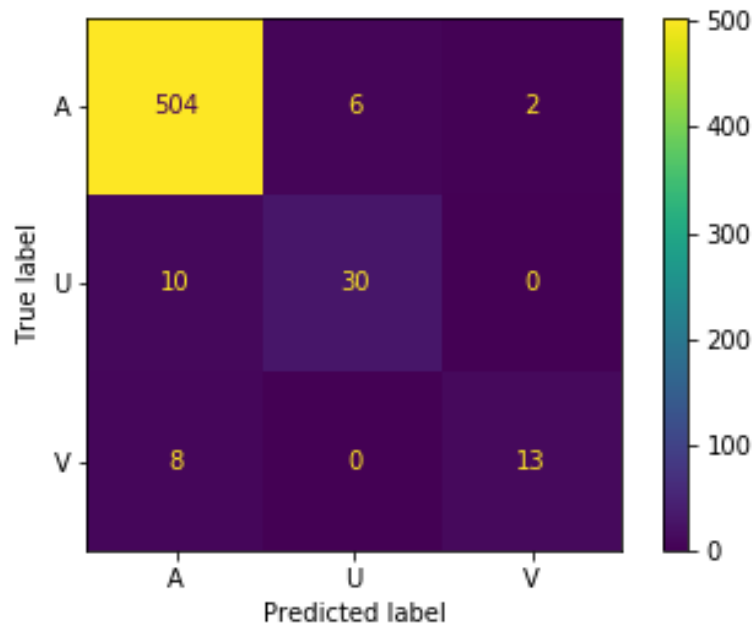
Figure b
White Box Testing Resize



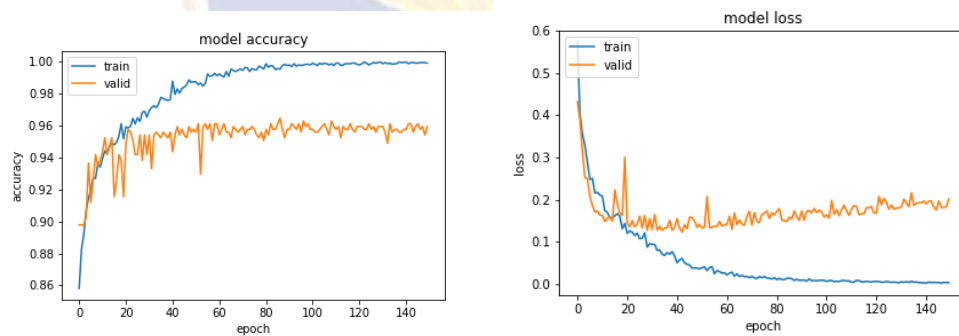
Lampiran 3 pengujian confusion matrix

Bagian Wajah:

Confusion Matrix



Training Grafik



Perhitungan Manual Confusion Matrix:

a. Kelas A

$$\text{Akurasi} = (504+43) / (504+18+8+43) = 95\%$$

$$\text{Precision} = 504 / (504+18) = 97\%$$

$$\text{Recall} = 504 / (504+8) = 98\%$$

$$\text{Specificity} = 43 / (43+18) = 70\%$$

$$\text{F1-score} = (2 \times 98.0 \times 97.0) / (98.0+97.0) = 97\%$$

b. Kelas U

$$\text{Akurasi} = (30+543) / (30+6+10+543) = 97\%$$

$$\text{Precision} = 30 / (30+6) = 83\%$$

$$\text{Recall} = 30 / (30+10) = 75\%$$

$$\text{Specificity} = 543 / (543+6) = 99\%$$

$$\text{F1-score} = (2 \times 75.0 \times 83.0) / (75.0+83.0) = 79\%$$

c. Kelas V

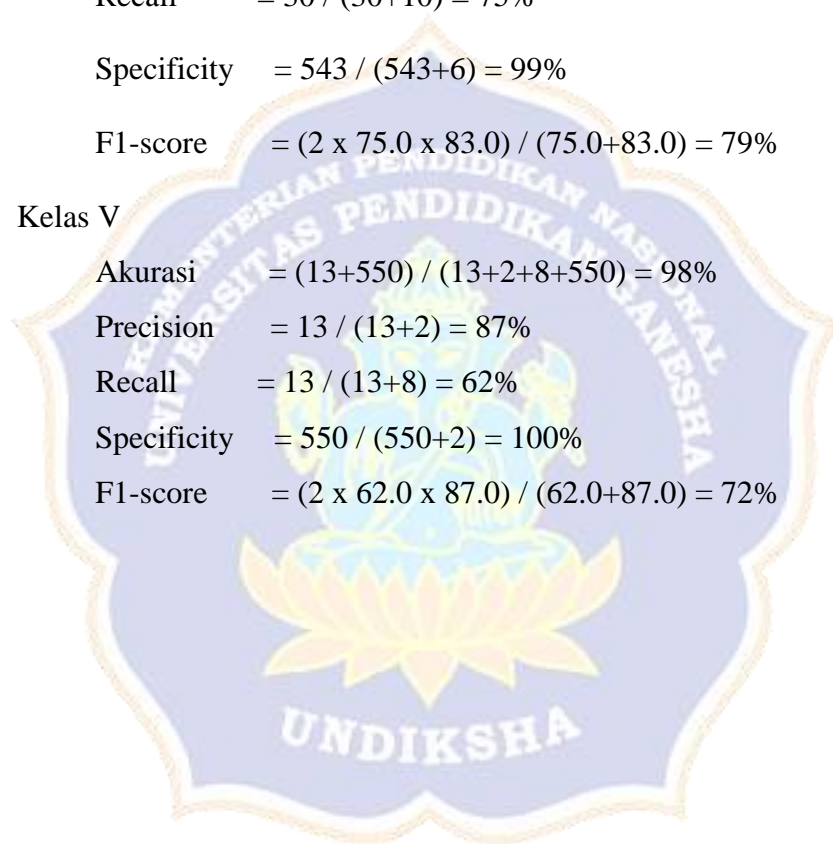
$$\text{Akurasi} = (13+550) / (13+2+8+550) = 98\%$$

$$\text{Precision} = 13 / (13+2) = 87\%$$

$$\text{Recall} = 13 / (13+8) = 62\%$$

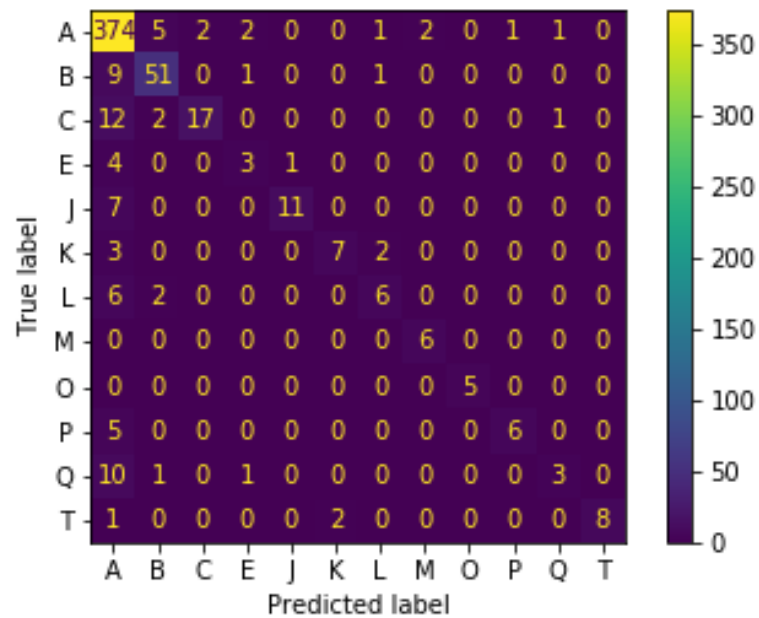
$$\text{Specificity} = 550 / (550+2) = 100\%$$

$$\text{F1-score} = (2 \times 62.0 \times 87.0) / (62.0+87.0) = 72\%$$

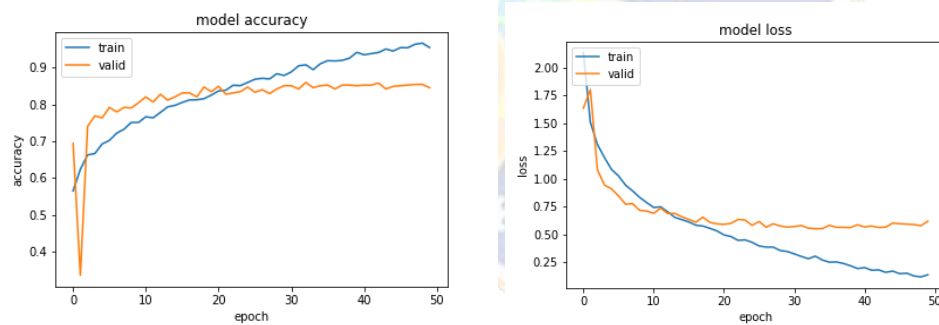


Bagian Badan Penuh

Confusion Matrix



Training Grafik



Perhitungan Manual Confusion Matrix:

a. Kelas A

$$\text{Akurasi} = (504+43) / (504+18+8+43) = 95\%$$

$$\text{Precision} = 504 / (504+18) = 97\%$$

$$\text{Recall} = 504 / (504+8) = 98\%$$

$$\text{Specificity} = 43 / (43+18) = 70\%$$

$$\text{F1-score} = (2 \times 98.0 \times 97.0) / (98.0+97.0) = 97\%$$

b. Kelas U

$$\text{Akurasi} = (30+543) / (30+6+10+543) = 97\%$$

$$\text{Precision} = 30 / (30+6) = 83\%$$

$$\text{Recall} = 30 / (30+10) = 75\%$$

$$\text{Specificity} = 543 / (543+6) = 99\%$$

$$\text{F1-score} = (2 \times 75.0 \times 83.0) / (75.0+83.0) = 79\%$$

c. Kelas V

$$\text{Akurasi} = (13+550) / (13+2+8+550) = 98\%$$

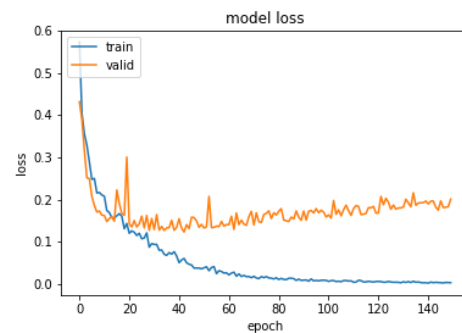
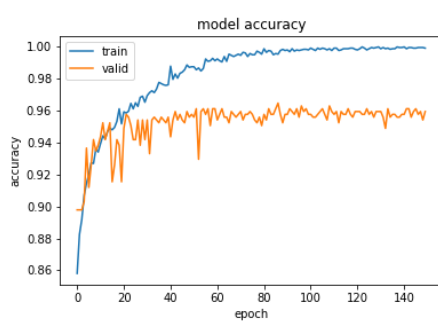
$$\text{Precision} = 13 / (13+2) = 87\%$$

$$\text{Recall} = 13 / (13+8) = 62\%$$

$$\text{Specificity} = 550 / (550+2) = 100\%$$

$$\text{F1-score} = (2 \times 62.0 \times 87.0) / (62.0+87.0) = 72\%$$

Training Grafik



Perhitungan Manual Confusion Matrix:

a. Kelas A

$$\text{Akurasi} = (374+185) / (374+59+14+185) = 88\%$$

$$\text{Precision} = 374 / (374+59) = 86\%$$

$$\text{Recall} = 374 / (374+14) = 96\%$$

$$\text{Specificity} = 185 / (185+59) = 76\%$$

$$\text{F1-score} = (2 \times 96.0 \times 86.0) / (96.0+86.0) = 91\%$$

b. Kelas B

$$\text{Akurasi} = (51+501) / (51+10+11+501) = 96\%$$

$$\text{Precision} = 51 / (51+10) = 84\%$$

$$\text{Recall} = 51 / (51+11) = 82\%$$

$$\text{Specificity} = 501 / (501+10) = 98\%$$

$$\text{F1-score} = (2 \times 82.0 \times 84.0) / (82.0+84.0) = 83\%$$

c. Kelas C

$$\text{Akurasi} = (17+550) / (17+2+15+550) = 97\%$$

$$\text{Precision} = 17 / (17+2) = 89\%$$

$$\text{Recall} = 17 / (17+15) = 53\%$$

$$\text{Specificity} = 550 / (550+2) = 100\%$$

$$\text{F1-score} = (2 \times 53.0 \times 89.0) / (53.0+89.0) = 66\%$$

d. Kelas E

$$\text{Akurasi} = (3+561) / (3+4+5+561) = 98\%$$

$$\text{Precision} = 3 / (3+4) = 43\%$$

$$\text{Recall} = 3 / (3+5) = 38\%$$

$$\text{Specificity} = 561 / (561+4) = 99\%$$

$$\text{F1-score} = (2 \times 38.0 \times 43.0) / (38.0+43.0) = 40\%$$

e. Kelas J

$$\text{Akurasi} = (11+554) / (11+1+7+554) = 99\%$$

$$\text{Precision} = 11 / (11+1) = 92\%$$

$$\text{Recall} = 11 / (11+7) = 61\%$$

$$\text{Specificity} = 554 / (554+1) = 100\%$$

$$\text{F1-score} = (2 \times 61.0 \times 92.0) / (61.0+92.0) = 73\%$$

f. Kelas K

$$\text{Akurasi} = (7+559) / (7+2+5+559) = 99\%$$

$$\text{Precision} = 7 / (7+2) = 78\%$$

$$\text{Recall} = 7 / (7+5) = 58\%$$

$$\text{Specificity} = 559 / (559+2) = 100\%$$

$$\text{F1-score} = (2 \times 58.0 \times 78.0) / (58.0+78.0) = 67\%$$

g. Kelas L

$$\text{Akurasi} = (6+555) / (6+4+8+555) = 98\%$$

$$\text{Precision} = 6 / (6+4) = 6\%$$

$$\text{Recall} = 6 / (6+8) = 43\%$$

$$\text{Specificity} = 555 / (555+4) = 99\%$$

$$\text{F1-score} = (2 \times 43.0 \times 60.0) / (43.0+60.0) = 50\%$$

h. Kelas M

$$\text{Akurasi} = (6+565) / (6+2+0+565) = 100\%$$

$$\text{Precision} = 6 / (6+2) = 75\%$$

$$\text{Recall} = 6 / (6+0) = 100\%$$

$$\text{Specificity} = 565 / (565+2) = 100\%$$

$$\text{F1-score} = (2 \times 100.0 \times 75.0) / (100.0+75.0) = 86\%$$

i. Kelas O

$$\text{Akurasi} = (5+568) / (5+0+0+568) = 100\%$$

$$\text{Precision} = 5 / (5+0) = 100\%$$

$$\text{Recall} = 5 / (5+0) = 100\%$$

$$\text{Specificity} = 568 / (568+0) = 100\%$$

$$\text{F1-score} = (2 \times 100.0 \times 100.0) / (100.0+100.0) = 100\%$$

j. Kelas P

$$\text{Akurasi} = (6+561) / (6+1+5+561) = 99\%$$

$$\text{Precision} = 6 / (6+1) = 86\%$$

$$\text{Recall} = 6 / (6+5) = 55\%$$

$$\text{Specificity} = 561 / (561+1) = 100\%$$

$$\text{F1-score} = (2 \times 55.0 \times 86.0) / (55.0+86.0) = 67\%$$

k. Kelas Q

$$\text{Akurasi} = (3+556) / (3+2+12+556) = 98\%$$

$$\text{Precision} = 3 / (3+2) = 60\%$$

$$\text{Recall} = 3 / (3+12) = 20\%$$

$$\text{Specificity} = 556 / (556+2) = 100\%$$

$$\text{F1-score} = (2 \times 20.0 \times 60.0) / (20.0+60.0) = 30\%$$

l. Kelas T

$$\text{Akurasi} = (8+562) / (8+0+3+562) = 99\%$$

$$\text{Precision} = 8 / (8+0) = 100\%$$

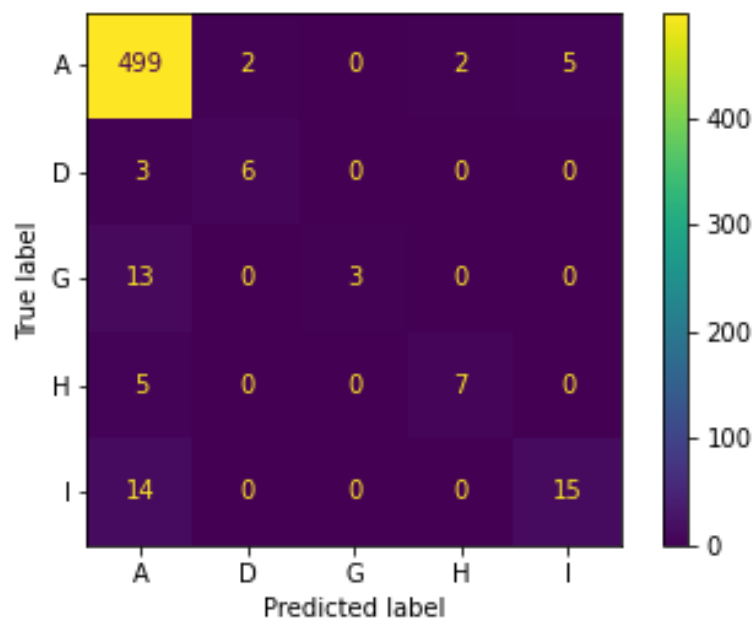
$$\text{Recall} = 8 / (8+3) = 73\%$$

$$\text{Specificity} = 562 / (562+0) = 100\%$$

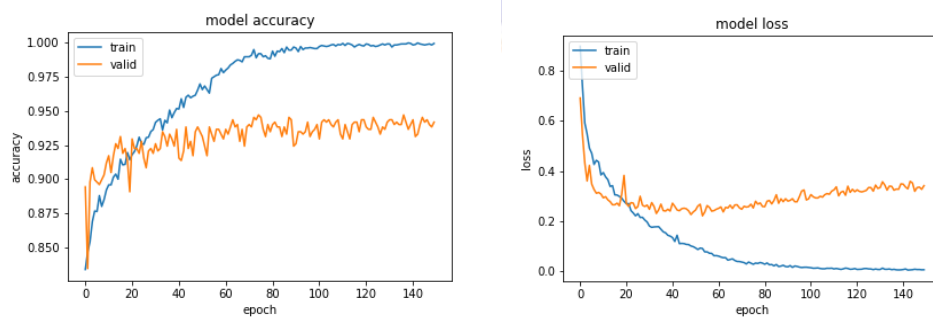
$$\text{F1-score} = (2 \times 73.0 \times 100.0) / (73.0+100.0) = 84\%$$

Bagian Kaki:

Confusion Matrix



Training Grafik



Perhitungan Manual Confusion Matrix:

- a. Kelas A

$$\begin{aligned} \text{Akurasi} &= (499+30) / (499+35+9+30) = 92\% \\ \text{Precision} &= 499 / (499+35) = 93\% \\ \text{Recall} &= 499 / (499+9) = 98\% \\ \text{Specificity} &= 30 / (30+35) = 46\% \\ \text{F1-score} &= (2 \times 98.0 \times 93.0) / (98.0+93.0) = 95\% \end{aligned}$$

b. Kelas D

$$\begin{aligned} \text{Akurasi} &= (6+562) / (6+2+3+562) = 99\% \\ \text{Precision} &= 6 / (6+2) = 75\% \\ \text{Recall} &= 6 / (6+3) = 67\% \\ \text{Specificity} &= 562 / (562+2) = 100\% \\ \text{F1-score} &= (2 \times 67.0 \times 75.0) / (67.0+75.0) = 71\% \end{aligned}$$

c. Kelas G

$$\begin{aligned} \text{Akurasi} &= (3+555) / (3+2+13+555) = 97\% \\ \text{Precision} &= 3 / (3+2) = 6\% \\ \text{Recall} &= 3 / (3+13) = 19\% \\ \text{Specificity} &= 555 / (555+2) = 100\% \\ \text{F1-score} &= (2 \times 19.0 \times 60.0) / (19.0+60.0) = 29\% \end{aligned}$$

d. Kelas H

$$\begin{aligned} \text{Akurasi} &= (7+559) / (7+2+5+559) = 99\% \\ \text{Precision} &= 7 / (7+2) = 78\% \\ \text{Recall} &= 7 / (7+5) = 58\% \\ \text{Specificity} &= 559 / (559+2) = 100\% \\ \text{F1-score} &= (2 \times 58.0 \times 78.0) / (58.0+78.0) = 67\% \end{aligned}$$

e. Kelas I

$$\begin{aligned} \text{Akurasi} &= (15+539) / (15+5+14+539) = 97\% \\ \text{Precision} &= 15 / (15+5) = 75\% \\ \text{Recall} &= 15 / (15+14) = 52\% \\ \text{Specificity} &= 539 / (539+5) = 99\% \\ \text{F1-score} &= (2 \times 52.0 \times 75.0) / (52.0+75.0) = 61\% \end{aligned}$$