

BAB 5 IMPLEMENTASI

5.1 Perangkat Keras

Perangkat keras yang digunakan dalam pengimplementasian sistem ini adalah laptop Asus A455LD dengan spesifikasi:

1. Processor Intel(R) Core(TM) i5-4210U CPU @ 1.70GHz (4 CPUs), ~2.4GHz.
2. Memory 4096 MB RAM

5.2 Perangkat Lunak

Perangkat lunak yang digunakan dalam pengimplementasian sistem ini adalah:

1. Sistem operasi Windows 10 Enterprise 64-bit
2. Program pengolah untuk membangun sistem adalah XAMPP 3.2.2 dan Sublime Text 3.

5.3 Implementasi Metode *Learning vector quantization(LVQ)*

Dalam implemetasi metode *Learning vector quantization* (LVQ) terdiri dua proses, yaitu proses pelatihan *Learning vector quantization* (LVQ) dan proses pengujian *Learning vector quantization* (LVQ).

5.3.1 Proses Pelatihan *Learning vector quantization(LVQ)*

Pada proses ini dilakukan perhitungan jarak antara data latih dengan data bobot yang telah diinisialisasi sebelumnya, selanjutnya akan diambil jarak terkecil dari keempat kelas tersebut kemudian akan dilakukan proses pembobotan baru yang akan digunakan data berikutnya. Hal ini dilakukan berulang pada seluruh hingga memenuhi syarat kondisi berhenti yaitu saat nilai *epoch* kurang dari nilai maksimal *epoch* dan nilai *learning rate* lebih besar dari nilai minimum *learning rate*.

```
1 while($alpha>$minalpha&&$epoch<$maxepoch) {  
2     $epoch = $epoch+1;  
3     for ($i = 0; $i < $ndata; $i++) {  
4         $min_status=FALSE;  
5         $min_value=0;  
6         for ($j = 0; $j < $nbobot; $j++) {  
7             $hasil_jarak[$j]=0;  
8             for ($x=1; $x < 33; $x++) {  
9  
10                $hasil_jarak[$j]=$hasil_jarak[$j]+pow( ($datalatih[$i] [$x]-  
11                $databobot[$j] [$x]),2);  
12            }  
13            $hasil_jarak[$j]=sqrt($hasil_jarak[$j]);  
14        }  
15        for ($j = 0; $j < $nbobot; $j++) {  
16            if ($min_status==FALSE) {  
17                $min_status=TRUE;  
18                $min_value=$hasil_jarak[$j];  
19            }  
20            if ($hasil_jarak[$j]<$min_value) {  
21                $min_value=$hasil_jarak[$j];  
22                $min_status=TRUE;  
23            }  
24        }  
25    }  
26}
```

```

19           $min_kelas=0;
20       }
21   else if ($min_value>$hasil_jarak[$j]) {
22       $min_kelas=$j;
23       $min_value =$hasil_jarak[$j];
24   }
25   }
26   if(($min_kelas+1)==$datalatih[$i][33]) {
27       for ($j = 1; $j < 33; $j++) {
28           $databobot[$min_kelas][$j] = $databobot[$min_kelas][$j] +
29           $alpha*($datalatih[$i][$j] - $databobot[$min_kelas][$j]);
30       }
31   }
32   else if (($min_kelas+1)!==$datalatih[$i][33]){
33       for ($j = 1; $j< 33; $j++) {
34           $databobot[$min_kelas][$j] = $databobot[$min_kelas][$j] -
35           $alpha*($datalatih[$i][$j] - $databobot[$min_kelas][$j]);
36       }
37   }
38   }
39   }
40   $alpha = $alpha*$pengali;
41 }
```

Source code 5.1 Proses Pelatihan *Learning vector quantization* (LVQ)

Penjelasan untuk *source code* 5.1:

- Baris 1 terdapat kondisi perulangan while dilakukan jika *epoch* kurang dari maksimal *epoch* dan *learning rate* lebih besar dari lebih minimum *learning rate*.
- Baris 2 berfungsi untuk menambah nilai *epoch*.
- Baris 3 terdapat kondisi perulangan for untuk jumlah data yang digunakan.
- Baris 4 – 14 merupakan rumus pencarian jarak setiap kelas dalam suatu data.
- Baris 15 – 25 berfungsi dalam menentukan kelas yang memiliki jarak terdekat atau terkecil dari 4 kelas yang telah dicari jaraknya sebelumnya.
- Baris 26 – 31 berfungsi untuk melakukan update bobot bila kelas data dengan kelas hasil jarak terdekat sesuai.
- Baris 32 – 35 berfungsi untuk melakukan update bobot bila kelas data dengan kelas hasil jarak terdekat tidak sesuai.
- Baris 40 berfungsi untuk update nilai *learning rate* untuk digunakan pada iterasi berikutnya.

5.3.2 Proses Pengujian *Learning vector quantization*(LVQ)

Pada proses pengujian ini dilakukan dengan melakukan pencarian jarak terdekat antara kelas data yang diujikan dengan bobot akhir yang didapatkan dari proses pelatihan sebelumnya.

```

1  for ($i = 0; $i < $nuji; $i++) {
2      $min_status=FALSE;
3      $min_value=0;
4      for ($j = 0; $j < $nbobot; $j++) {
5          $hasil_jarak[$j]=0;
6          for ($x=1; $x < 33; $x++) {
7
8          $hasil_jarak[$j]=$hasil_jarak[$j]+pow((datauji[$i][$x]-
9          $databobot[$j][$x]),2);
10         }
11         $hasil_jarak[$j]=sqrt($hasil_jarak[$j]);
12     }
13     for ($j = 0; $j < $nbobot; $j++) {
14         if ($min_status==FALSE) {
15             $min_status=TRUE;
16             $min_value=$hasil_jarak[$j];
17             $min_kelas=0;
18         }
19         else if ($min_value>$hasil_jarak[$j]) {
20             $min_kelas=$j;
21             $min_value =$hasil_jarak[$j];
22         }
23     }
24     if(($min_kelas+1)==$datauji[$i][33]) {
25         echo "sama kelas <br>";
26         $ndatabenar = $ndatabenar + 1;
27     }
28 }
29 }
30 $akurasi = $ndatabenar/$nuji*100;
31 echo "akurasi :" .+$akurasi;
}

```

Source code 5.2 Proses Pengujian Learning vector quantization (LVQ)

Penjelasan untuk *source code* 5.2:

- Baris 1 terdapat kondisi perulangan for untuk jumlah data yang di uji.
- Baris 2 – 12 merupakan rumus pencarian jarak setiap kelas dalam suatu data.
- Baris 13 – 23 berfungsi dalam menentukan kelas yang memiliki jarak terdekat atau terkecil dari 4 kelas yang telah dicari jaraknya sebelumnya.
- Baris 24 – 26 berfungsi untuk melakukan pencocokan dengan kelas data dengan kelas hasil jarak bernilai sama, kemudian dilakukan penambahan nilai benar.
- Baris 30 befungsi untuk menghitung besar akurasi dari jumlah data benar dan jumlah data yang diuji.

5.4 Implementasi Antarmuka

5.4.1 Antarmuka Halaman Awal Sistem (*Home*)

Halaman awal sistem (*home*) merupakan halaman yang menjadi tampilan pertama pada sistem “Identifikasi Gangguan Kepribadian Dramatis Menggunakan Metode *Learning vector quantization (LVQ)*” seperti pada Gambar 5.1, pada halaman ini juga ditampilkan sedikit informasi mengenai macam gangguan kepribadian dramatis yaitu narsistik, histrionik, borderline, antisosial.



Gambar 5. 1 Antarmuka Halaman Awal Sistem

5.4.2 Antarmuka Halaman Data Latih

Halaman data latih merupakan halaman menjadi tampilan dalam memasukan data latih untuk sistem “Identifikasi Gangguan Kepribadian Dramatis Menggunakan Metode *Learning vector quantization (LVQ)*”. Gambar 5.2 menunjukkan halaman data latih yang menampilkan data latih yang telah dimasukan.

| Thru | 1801 | 1802 | 1803 | 1804 | 1805 | 1806 | 1807 | 1808 | 1809 | 1810 | 1811 | 1812 | 1813 | 1814 | 1815 | 1816 | 1817 | 1818 | 1819 | 1820 | 1821 | 1822 | 1823 | 1824 | 1825 | 1826 | 1827 | 1828 | 1829 | 1830 | 1831 | 1832 | 1833 | 1834 | 1835 | 1836 | 1837 | 1838 | 1839 | 1840 | 1841 | 1842 | 1843 | 1844 | 1845 | 1846 | 1847 | 1848 | 1849 | 1850 | 1851 | 1852 | 1853 | 1854 | 1855 | 1856 | 1857 | 1858 | 1859 | 1860 | 1861 | 1862 | 1863 | 1864 | 1865 | 1866 | 1867 | 1868 | 1869 | 1870 | 1871 | 1872 | 1873 | 1874 | 1875 | 1876 | 1877 | 1878 | 1879 | 1880 | 1881 | 1882 | 1883 | 1884 | 1885 | 1886 | 1887 | 1888 | 1889 | 1890 | 1891 | 1892 | 1893 | 1894 | 1895 | 1896 | 1897 | 1898 | 1899 | 18100 | 18101 | 18102 | 18103 | 18104 | 18105 | 18106 | 18107 | 18108 | 18109 | 18110 | 18111 | 18112 | 18113 | 18114 | 18115 | 18116 | 18117 | 18118 | 18119 | 18120 | 18121 | 18122 | 18123 | 18124 | 18125 | 18126 | 18127 | 18128 | 18129 | 18130 | 18131 | 18132 | 18133 | 18134 | 18135 | 18136 | 18137 | 18138 | 18139 | 18140 | 18141 | 18142 | 18143 | 18144 | 18145 | 18146 | 18147 | 18148 | 18149 | 18150 | 18151 | 18152 | 18153 | 18154 | 18155 | 18156 | 18157 | 18158 | 18159 | 18160 | 18161 | 18162 | 18163 | 18164 | 18165 | 18166 | 18167 | 18168 | 18169 | 18170 | 18171 | 18172 | 18173 | 18174 | 18175 | 18176 | 18177 | 18178 | 18179 | 18180 | 18181 | 18182 | 18183 | 18184 | 18185 | 18186 | 18187 | 18188 | 18189 | 18190 | 18191 | 18192 | 18193 | 18194 | 18195 | 18196 | 18197 | 18198 | 18199 | 181000 | 181001 | 181002 | 181003 | 181004 | 181005 | 181006 | 181007 | 181008 | 181009 | 181010 | 181011 | 181012 | 181013 | 181014 | 181015 | 181016 | 181017 | 181018 | 181019 | 181020 | 181021 | 181022 | 181023 | 181024 | 181025 | 181026 | 181027 | 181028 | 181029 | 181030 | 181031 | 181032 | 181033 | 181034 | 181035 | 181036 | 181037 | 181038 | 181039 | 181040 | 181041 | 181042 | 181043 | 181044 | 181045 | 181046 | 181047 | 181048 | 181049 | 181050 | 181051 | 181052 | 181053 | 181054 | 181055 | 181056 | 181057 | 181058 | 181059 | 181060 | 181061 | 181062 | 181063 | 181064 | 181065 | 181066 | 181067 | 181068 | 181069 | 181070 | 181071 | 181072 | 181073 | 181074 | 181075 | 181076 | 181077 | 181078 | 181079 | 181080 | 181081 | 181082 | 181083 | 181084 | 181085 | 181086 | 181087 | 181088 | 181089 | 181090 | 181091 | 181092 | 181093 | 181094 | 181095 | 181096 | 181097 | 181098 | 181099 | 181100 | 181101 | 181102 | 181103 | 181104 | 181105 | 181106 | 181107 | 181108 | 181109 | 181110 | 181111 | 181112 | 181113 | 181114 | 181115 | 181116 | 181117 | 181118 | 181119 | 181120 | 181121 | 181122 | 181123 | 181124 | 181125 | 181126 | 181127 | 181128 | 181129 | 181130 | 181131 | 181132 | 181133 | 181134 | 181135 | 181136 | 181137 | 181138 | 181139 | 181140 | 181141 | 181142 | 181143 | 181144 | 181145 | 181146 | 181147 | 181148 | 181149 | 181150 | 181151 | 181152 | 181153 | 181154 | 181155 | 181156 | 181157 | 181158 | 181159 | 181160 | 181161 | 181162 | 181163 | 181164 | 181165 | 181166 | 181167 | 181168 | 181169 | 181170 | 181171 | 181172 | 181173 | 181174 | 181175 | 181176 | 181177 | 181178 | 181179 | 181180 | 181181 | 181182 | 181183 | 181184 | 181185 | 181186 | 181187 | 181188 | 181189 | 181190 | 181191 | 181192 | 181193 | 181194 | 181195 | 181196 | 181197 | 181198 | 181199 | 181200 | 181201 | 181202 | 181203 | 181204 | 181205 | 181206 | 181207 | 181208 | 181209 | 181210 | 181211 | 181212 | 181213 | 181214 | 181215 | 181216 | 181217 | 181218 | 181219 | 181220 | 181221 | 181222 | 181223 | 181224 | 181225 | 181226 | 181227 | 181228 | 181229 | 181230 | 181231 | 181232 | 181233 | 181234 | 181235 | 181236 | 181237 | 181238 | 181239 | 181240 | 181241 | 181242 | 181243 | 181244 | 181245 | 181246 | 181247 | 181248 | 181249 | 181250 | 181251 | 181252 | 181253 | 181254 | 181255 | 181256 | 181257 | 181258 | 181259 | 181260 | 181261 | 181262 | 181263 | 181264 | 181265 | 181266 | 181267 | 181268 | 181269 | 181270 | 181271 | 181272 | 181273 | 181274 | 181275 | 181276 | 181277 | 181278 | 181279 | 181280 | 181281 | 181282 | 181283 | 181284 | 181285 | 181286 | 181287 | 181288 | 181289 | 181290 | 181291 | 181292 | 181293 | 181294 | 181295 | 181296 | 181297 | 181298 | 181299 | 181300 | 181301 | 181302 | 181303 | 181304 | 181305 | 181306 | 181307 | 181308 | 181309 | 181310 | 181311 | 181312 | 181313 | 181314 | 181315 | 181316 | 181317 | 181318 | 181319 | 181320 | 181321 | 181322 | 181323 | 181324 | 181325 | 181326 | 181327 | 181328 | 181329 | 181330 | 181331 | 181332 | 181333 | 181334 | 181335 | 181336 | 181337 | 181338 | 181339 | 181340 | 181341 | 181342 | 181343 | 181344 | 181345 | 181346 | 181347 | 181348 | 181349 | 181350 | 181351 | 181352 | 181353 | 181354 | 181355 | 181356 | 181357 | 181358 | 181359 | 181360 | 181361 | 181362 | 181363 | 181364 | 181365 | 181366 | 181367 | 181368 | 181369 | 181370 | 181371 | 181372 | 181373 | 181374 | 181375 | 181376 | 181377 | 181378 | 181379 | 181380 | 181381 | 181382 | 181383 | 181384 | 181385 | 181386 | 181387 | 181388 | 181389 | 181390 | 181391 | 181392 | 181393 | 181394 | 181395 | 181396 | 181397 | 181398 | 181399 | 181400 | 181401 | 181402 | 181403 | 181404 | 181405 | 181406 | 181407 | 181408 | 181409 | 181410 | 181411 | 181412 | 181413 | 181414 | 181415 | 181416 | 181417 | 181418 | 181419 | 181420 | 181421 | 181422 | 181423 | 181424 | 181425 | 181426 | 181427 | 181428 | 181429 | 181430 | 181431 | 181432 | 181433 | 181434 | 181435 | 181436 | 181437 | 181438 | 181439 | 181440 | 181441 | 181442 | 181443 | 181444 | 181445 | 181446 | 181447 | 181448 | 181449 | 181450 | 181451 | 181452 | 181453 | 181454 | 181455 | 181456 | 181457 | 181458 | 181459 | 181460 | 181461 | 181462 | 181463 | 181464 | 181465 | 181466 | 181467 | 181468 | 181469 | 181470 | 181471 | 181472 | 181473 | 181474 | 181475 | 181476 | 181477 | 181478 | 181479 | 181480 | 181481 | 181482 | 181483 | 181484 | 181485 | 181486 | 181487 | 181488 | 181489 | 181490 | 181491 | 181492 | 181493 | 181494 | 181495 | 181496 | 181497 | 181498 | 181499 | 181500 | 181501 | 181502 | 181503 | 181504 | 181505 | 181506 | 181507 | 181508 | 181509 | 181510 | 181511 | 181512 | 181513 | 181514 | 181515 | 181516 | 181517 | 181518 | 181519 | 181520 | 181521 | 181522 | 181523 | 181524 | 181525 | 181526 | 181527 | 181528 | 181529 | 181530 | 181531 | 181532 | 181533 | 181534 | 181535 | 181536 | 181537 | 181538 | 181539 | 181540 | 181541 | 181542 | 181543 | 181544 | 181545 | 181546 | 181547 | 181548 | 181549 | 181550 | 181551 | 181552 | 181553 | 181554 | 181555 | 181556 | 181557 | 181558 | 181559 | 181560 | 181561 | 181562 | 181563 | 181564 | 181565 | 181566 | 181567 | 181568 | 181569 | 181570 | 181571 | 181572 | 181573 | 181574 | 181575 | 181576 | 181577 | 181578 | 181579 | 181580 | 181581 | 181582 | 181583 | 181584 | 181585 | 181586 | 181587 | 181588 | 181589 | 181590 | 181591 | 181592 | 181593 | 181594 | 181595 | 181596 | 181597 | 181598 | 181599 | 181600 | 181601 | 181602 | 181603 | 181604 | 181605 | 181606 | 181607 | 181608 | 181609 | 181610 | 181611 | 181612 | 181613 | 181614 | 181615 | 181616 | 181617 | 181618 | 181619 | 181620 | 181621 | 181622 | 181623 | 181624 | 181625 | 181626 | 181627 | 181628 | 181629 | 181630 | 181631 | 181632 | 181633 | 181634 | 181635 | 181636 | 181637 | 181638 | 181639 | 181640 | 181641 | 181642 | 181643 | 181644 | 181645 | 181646 | 181647 | 181648 | 181649 | 181650 | 181651 | 181652 | 181653 | 181654 | 181655 | 181656 | 181657 | 181658 | 181659 | 181660 | 181661 | 181662 | 181663 | 181664 | 181665 | 181666 | 181667 | 181668 | 181669 | 181670 | 181671 | 181672 | 181673 | 181674 | 181675 | 181676 | 181677 | 181678 | 181679 | 181680 | 181681 | 181682 | 181683 | 181684 | 181685 | 181686 | 181687 | 181688 | 181689 | 181690 | 181691 | 181692 | 181693 | 181694 | 181695 | 181696 | 181697 | 181698 | 181699 | 181700 | 181701 | 181702 | 181703 | 181704 | 181705 | 181706 | 181707 | 181708 | 181709 | 181710 | 181711 | 181712 | 181713 | 181714 | 181715 | 181716 | 181717 | 181718 | 181719 | 181720 | 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--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

5.4.3 Antarmuka Halaman Data Bobot

Halaman data bobot merupakan halaman menjadi tampilan dalam memasukan data latih untuk sistem “Identifikasi Gangguan Kepribadian Dramatis Menggunakan Metode *Learning vector quantization (LVQ)*”. Gambar 5.3 menunjukan halaman data bobot yang menampilkan data latih yang telah dimasukan.

Data	W11	W12	W13	W14	W15	W16	W17	W18	W19	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25
1	1	1	1	1	0	1	1	0	1	1	1	0	1	0	1	1	1	1	0	1	0	1	0	1	1
2	1	1	0	0	1	0	1	0	1	1	1	0	1	1	0	1	1	1	0	0	0	1	0	0	0
12	1	1	1	1	1	0	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1
14	1	1	0	1	1	0	1	1	0	1	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1

Gambar 5. 3 Antarmuka Halaman Data bobot

5.4.4 Antarmuka Halaman Proses Pelatihan

Halaman proses pelatihan merupakan halaman menjadi tampilan dalam memasukan nilai *learning rate*, minimum *learning rate*, maksimal *epoch*, dan pengkali *learning rate* untuk inisialisasi dalam proses pelatihan. Gambar 5.4 menunjukan halaman proses pelatihan yang digunakan.

Learning rate	0.2
Minimum Learning rate	0.001
Max Epoch	1000
Pengali Learning rate	0.4

Gambar 5. 4 Antarmuka Halaman Proses pelatihan

5.4.5 Antarmuka Halaman Proses Pengujian

Halaman proses pengujian merupakan halaman menjadi tampilan dalam memasukan data uji untuk proses pengujian kemudian akan di tampilkan hasil dari proses pengujian dibawah untuk setiap data yang diuji. Gambar 5.5 menunjukan halaman proses pengujian yang digunakan.

Personality Disorder											
Data Latih Data valid Proses Pelatihan Proses Pengujian											
<input type="button" value="Choose File"/> No file chosen			<input type="button" value="AB"/>								
Data uji ke : 73 Target data : Narisistik											
<table border="1"> <thead> <tr> <th>W1</th><th>W2</th><th>W3</th><th>W4</th></tr> </thead> <tbody> <tr> <td>3.2110684229002</td><td>3.1754084406074</td><td>4.3731109096447</td><td>4.362772825450</td></tr> </tbody> </table>				W1	W2	W3	W4	3.2110684229002	3.1754084406074	4.3731109096447	4.362772825450
W1	W2	W3	W4								
3.2110684229002	3.1754084406074	4.3731109096447	4.362772825450								
Nilai min : 3.1754084406074 Kelas min : Borderline Hasil : Beda kelas											
Data uji ke : 74 Target data : Antisosial											
<table border="1"> <thead> <tr> <th>W1</th><th>W2</th><th>W3</th><th>W4</th></tr> </thead> <tbody> <tr> <td>2.1011848586661</td><td>3.2542233822346</td><td>4.481413231556</td><td>4.3202144018776</td></tr> </tbody> </table>				W1	W2	W3	W4	2.1011848586661	3.2542233822346	4.481413231556	4.3202144018776
W1	W2	W3	W4								
2.1011848586661	3.2542233822346	4.481413231556	4.3202144018776								
Nilai min : 2.1011848586661 Kelas min : Antisosial Hasil : Sama kelas											

Gambar 5. 5 Antarmuka Halaman Proses pengujian

5.4.6 Antarmuka Halaman Hasil Pelatihan

Halaman hasil pelatihan merupakan halaman menjadi tampilan dalam menampilkan hasil dari proses pelatihan yang telah dilakukan dengan menampilkan setiap nilai yang dihasilkan pada prosesnya. Gambar 5.6 menunjukan halaman hasil pelatihan yang digunakan.

Personality Disorder																																																																													
Data Latih Data valid Proses Pelatihan Proses Pengujian																																																																													
epoch ke : 1 data ke : 1 Target data : 1 W1: 2.9079138555574 W2: 2.58803867762 W3: 4.086015767161 W4: 4.15880386685167 nilai min : 1.58803867762 kelas min : 2 beda kelas :																																																																													
<table border="1"> <thead> <tr> <th>Data</th><th>W1</th><th>W2</th><th>W3</th><th>W4</th><th>W1*</th><th>W2*</th><th>W3*</th><th>W4*</th><th>W1#</th><th>W2#</th><th>W3#</th><th>W4#</th></tr> </thead> <tbody> <tr> <td>1</td><td>1.03868889609</td><td>0.8837725719661</td><td>0.3912170818738</td><td>0.8175404026424</td><td>0.3811410851282</td><td>0.9670505421703</td><td>0.811538788711</td><td>0.3315248681264</td><td>0.8281641745167</td><td>0.091612488071292</td><td></td><td></td></tr> <tr> <td>2</td><td>0.507792154838</td><td>0.098112234603472</td><td>0.4551818889574</td><td>0.7109961871162</td><td>0.3818883861627</td><td>0.7002411832054</td><td>0.80405888813232</td><td>0.10390195196966</td><td>1.011154220742</td><td>1.0916203061042</td><td></td><td></td></tr> <tr> <td>12</td><td>1</td><td>1</td><td>1.2094881747982</td><td>1.1742738471691</td><td>-0.7143194670514</td><td>1.174013845169</td><td>-0.71407384618814</td><td>1</td><td>1.17407384618814</td><td>1</td><td>1.17407384618814</td><td>1.17407384618814</td></tr> <tr> <td>14</td><td>0.8298967147076</td><td>-0.1413014287298</td><td>0.62344073741215</td><td>1</td><td>0.1986973191948</td><td>1</td><td>0.1986973191948</td><td>0.1000948847399</td><td>1</td><td>0.1000948847399</td><td>1</td><td>0.1000948847399</td></tr> </tbody> </table>													Data	W1	W2	W3	W4	W1*	W2*	W3*	W4*	W1#	W2#	W3#	W4#	1	1.03868889609	0.8837725719661	0.3912170818738	0.8175404026424	0.3811410851282	0.9670505421703	0.811538788711	0.3315248681264	0.8281641745167	0.091612488071292			2	0.507792154838	0.098112234603472	0.4551818889574	0.7109961871162	0.3818883861627	0.7002411832054	0.80405888813232	0.10390195196966	1.011154220742	1.0916203061042			12	1	1	1.2094881747982	1.1742738471691	-0.7143194670514	1.174013845169	-0.71407384618814	1	1.17407384618814	1	1.17407384618814	1.17407384618814	14	0.8298967147076	-0.1413014287298	0.62344073741215	1	0.1986973191948	1	0.1986973191948	0.1000948847399	1	0.1000948847399	1	0.1000948847399
Data	W1	W2	W3	W4	W1*	W2*	W3*	W4*	W1#	W2#	W3#	W4#																																																																	
1	1.03868889609	0.8837725719661	0.3912170818738	0.8175404026424	0.3811410851282	0.9670505421703	0.811538788711	0.3315248681264	0.8281641745167	0.091612488071292																																																																			
2	0.507792154838	0.098112234603472	0.4551818889574	0.7109961871162	0.3818883861627	0.7002411832054	0.80405888813232	0.10390195196966	1.011154220742	1.0916203061042																																																																			
12	1	1	1.2094881747982	1.1742738471691	-0.7143194670514	1.174013845169	-0.71407384618814	1	1.17407384618814	1	1.17407384618814	1.17407384618814																																																																	
14	0.8298967147076	-0.1413014287298	0.62344073741215	1	0.1986973191948	1	0.1986973191948	0.1000948847399	1	0.1000948847399	1	0.1000948847399																																																																	
epoch ke : 1 data ke : 2 Target data : 2 W1: 2.4050674759985																																																																													

Gambar 5. 6 Antarmuka Halaman Hasil pelatihan