>> modCNC = py.importlib.import\_module('evaluate\_12ECG\_score');py.importlib.reload(modCNC);

>> cc=modCNC.evaluate\_12ECG\_score(A,B)

Finding label and output files... V5- List and directory \*\*\*

--- len dir\_pro: (15966,)

--- presenza list files -----

Loading labels and outputs...

.... numero recordings.. 15966

.... numero classi ... 111

----- Alfa\_limit: 0.0400 sum\_prob= 1.000

Organizing labels and outputs...

Loading weights...

Evaluating model...

- AUROC and AUPRC...

- Accuracy...

- F-measure...

- F-beta and G-beta measures...

N1 N2 TP FP FN TN total Accuracy Recall Precision F\_beta G\_beta

0 1 86.5 269.7 201.0 11116.6 287.5 0.960 0.301 0.243 0.287121 0.114076

1 2 304.1 2405.9 364.1 8599.6 668.2 0.763 0.455 0.112 0.282475 0.088449

2 3 472.2 752.8 511.6 9937.2 983.8 0.892 0.480 0.385 0.457518 0.210024

3 4 17.1 324.9 142.3 11189.5 159.4 0.960 0.107 0.050 0.087204 0.027264

4 5 382.3 134.9 250.7 10905.9 633.0 0.967 0.604 0.739 0.626944 0.375374

5 6 1.8 60.0 489.5 11122.5 491.3 0.953 0.004 0.028 0.004317 0.001681

6 7 2.2 59.6 1270.9 10341.1 1273.1 0.886 0.002 0.035 0.002102 0.000832

7 8 117.7 543.2 57.9 10955.0 175.6 0.949 0.670 0.178 0.431668 0.151535

8 9 289.1 2711.5 48.7 8624.4 337.9 0.764 0.856 0.096 0.332174 0.093326

9 10 508.9 806.4 333.6 10024.8 842.6 0.902 0.604 0.387 0.543079 0.256698

10 11 554.4 2476.9 236.4 8406.1 790.8 0.768 0.701 0.183 0.447518 0.158228

11 12 267.6 336.4 1225.2 9844.6 1492.8 0.866 0.179 0.443 0.203480 0.087606

12 13 719.7 728.9 146.0 10079.2 865.7 0.925 0.831 0.497 0.732651 0.413453

13 14 44.4 674.5 16.0 10938.9 60.4 0.941 0.735 0.062 0.231192 0.059149

14 15 388.0 1865.8 373.0 9046.9 761.0 0.808 0.510 0.172 0.366186 0.129340

15 16 704.7 262.9 127.8 10578.4 832.6 0.967 0.846 0.728 0.819880 0.576131

16 17 25.3 133.1 196.3 11319.0 221.7 0.972 0.114 0.160 0.121206 0.045970

17 18 2.5 59.3 738.4 10873.6 740.9 0.932 0.003 0.040 0.004132 0.001625

18 19 17.5 244.8 563.4 10848.0 580.9 0.931 0.030 0.067 0.033803 0.012585

19 20 81.8 648.5 164.3 10779.1 246.1 0.930 0.332 0.112 0.238556 0.077261

20 21 84.6 778.8 443.2 10367.1 527.9 0.895 0.160 0.098 0.142244 0.048364

21 22 206.6 4107.6 381.0 6978.7 587.5 0.616 0.352 0.048 0.154968 0.040691

22 23 26.4 191.5 656.1 10799.8 682.5 0.927 0.039 0.121 0.044807 0.017265

23 24 654.6 1194.5 296.2 9528.6 950.7 0.872 0.688 0.354 0.579053 0.268108

------ mean values --------> 0.298928 0.135626

-- mean values(>0) -> 15194.0 0.889 0.400 0.222 0.298928 0.135626

- Challenge metric...

(N= 15966) norm\_score:0.334277 observed:9189.718 correct:19801.577 inact:3861.236

Done.

cc =

Python tuple with no properties.

(0.6593723666350675, 0.1911254010943264, 0.08931479393711637, 0.2537653192646098, 0.29892836589799215, 0.13562643731180113, 0.33427653653839473)

>> cc=modCNC.evaluate\_12ECG\_score(dir\_CHAL\_header3,dir\_CHAL\_output3)

Finding label and output files... V5- List and directory \*\*\*

--- len dir\_pro: ()

Loading labels and outputs...

.... numero recordings.. 16002

.... numero classi ... 24

----- Alfa\_limit: 0.0400 sum\_prob= 1.000

Organizing labels and outputs...

Loading weights...

Evaluating model...

- AUROC and AUPRC...

- Accuracy...

- F-measure...

- F-beta and G-beta measures...

N1 N2 TP FP FN TN total Accuracy Recall Precision F\_beta G\_beta

0 1 276.0 311.2 13.5 11031.9 289.5 0.972 0.953 0.470 0.790753 0.449383

1 2 531.4 3847.3 138.1 7115.7 669.6 0.657 0.794 0.121 0.376537 0.114168

2 3 922.5 1230.1 78.7 9401.3 1001.3 0.887 0.921 0.429 0.749088 0.399346

3 4 155.4 1760.8 45.0 9671.4 200.4 0.845 0.776 0.081 0.285934 0.077471

4 5 594.3 742.1 59.4 10236.8 653.7 0.931 0.909 0.445 0.752077 0.408418

5 6 402.0 4979.2 89.8 6161.6 491.8 0.564 0.817 0.075 0.273532 0.072292

6 7 997.0 4456.9 280.9 5897.8 1277.9 0.593 0.780 0.183 0.471815 0.165733

7 8 135.3 2911.5 40.3 8545.5 175.6 0.746 0.771 0.044 0.180480 0.043273

8 9 272.9 2444.5 65.0 8850.3 337.9 0.784 0.808 0.100 0.335291 0.095825

9 10 608.4 4398.1 260.5 6365.6 868.9 0.600 0.700 0.122 0.358651 0.110074

10 11 644.6 3295.6 181.6 7510.8 826.2 0.701 0.780 0.164 0.444863 0.149790

11 12 1246.5 4386.4 246.4 5753.5 1492.8 0.602 0.835 0.221 0.537077 0.203485

12 13 823.7 1119.1 51.0 9638.8 874.7 0.899 0.942 0.424 0.756834 0.402810

13 14 217.7 670.9 37.6 10706.5 255.3 0.939 0.853 0.245 0.569932 0.225854

14 15 4.0 1.0 758.0 10869.6 762.0 0.935 0.005 0.800 0.006551 0.002630

15 16 827.9 755.6 55.5 9993.7 883.4 0.930 0.937 0.523 0.808945 0.488575

16 17 248.8 2707.7 80.1 8596.0 328.9 0.760 0.757 0.084 0.291230 0.079840

17 18 650.2 2101.2 97.4 8783.9 747.6 0.811 0.870 0.236 0.566201 0.220690

18 19 495.2 3464.9 85.7 7586.8 580.9 0.695 0.853 0.125 0.394066 0.119872

19 20 186.7 3255.4 59.8 8130.8 246.5 0.715 0.758 0.054 0.210825 0.052421

21 21 419.7 4598.6 112.7 6501.7 532.4 0.595 0.788 0.084 0.293590 0.080041

22 22 445.0 4518.1 144.0 6525.5 589.0 0.599 0.755 0.090 0.303994 0.084743

23 23 565.2 5299.6 145.5 5622.3 710.7 0.532 0.795 0.096 0.324540 0.091815

------ mean values --------> 0.403312 0.165542

-- mean values(>0) -> 14796.9 0.752 0.789 0.227 0.438383 0.179937

- Challenge metric...

(N= 16002) norm\_score:0.494422 observed:12124.615 correct:20448.652 inact:3984.252

Done.

cc =

Python tuple with no properties.

(0.8218480573236527, 0.3602116600982343, 0.028808898887639045, 0.2909704022189974, 0.4033122223052895, 0.1655419476363165, 0.4944220727518936)

>>

>> cc=modCNC.evaluate\_12ECG\_score(LIST\_1,LIST\_2)

Finding label and output files... \*\* V5- List and directory \*\*\*

--- len dir\_pro: (43101,)

--- presenza list files -----

Loading labels and outputs...

.... numero recordings.. 43101

.... numero classi ... 111

----- Alfa\_limit: 0.0400 sum\_prob= nan

Organizing labels and outputs...

Loading weights...

Evaluating model...

- AUROC and AUPRC...

- Accuracy...

- F-measure...

- F-beta and G-beta measures...

N1 N2 TP FP FN TN total Accuracy Recall Precision F\_beta G\_beta

0 1 87.5 954.5 202.0 36371.9 289.5 0.969 0.302 0.084 0.198853 0.060510

1 2 393.6 6399.7 493.5 30329.2 887.0 0.817 0.444 0.058 0.190287 0.050586

2 3 1253.5 2034.6 1293.1 33034.8 2546.5 0.912 0.492 0.381 0.465136 0.213386

3 4 24.6 881.3 175.8 36534.3 200.4 0.972 0.123 0.027 0.071993 0.019550

4 5 399.3 540.4 275.2 36401.0 674.5 0.978 0.592 0.425 0.548887 0.268005

5 6 2.0 479.4 493.8 36640.6 495.8 0.974 0.004 0.004 0.004057 0.001361

6 7 11.8 469.6 2900.0 34234.5 2911.8 0.910 0.004 0.025 0.004878 0.001884

7 8 117.7 1736.5 57.9 35703.9 175.6 0.952 0.670 0.063 0.230192 0.059747

8 9 290.1 8768.9 48.7 28508.2 338.9 0.766 0.856 0.032 0.139292 0.031686

9 10 993.0 2215.4 599.0 33808.5 1592.0 0.925 0.624 0.309 0.518444 0.225342

10 11 981.2 6497.1 394.6 29743.0 1375.8 0.817 0.713 0.131 0.377925 0.118682

11 12 459.4 866.6 3354.1 32935.8 3813.5 0.888 0.120 0.346 0.138530 0.057176

12 13 1396.0 3390.2 236.2 32593.5 1632.2 0.904 0.855 0.292 0.616879 0.265470

13 14 189.6 1710.8 65.7 35649.9 255.2 0.953 0.743 0.100 0.324479 0.093313

14 15 4644.0 6964.0 4538.0 21469.9 9182.0 0.694 0.506 0.400 0.480387 0.224521

15 16 1422.8 786.4 227.9 35178.9 1650.7 0.973 0.862 0.644 0.807309 0.533888

16 17 65.6 739.4 263.8 36547.1 329.4 0.973 0.199 0.081 0.154486 0.049212

17 18 5.0 476.4 901.4 36233.1 906.4 0.963 0.006 0.010 0.006087 0.002189

18 19 21.2 823.5 812.7 35958.5 834.0 0.957 0.025 0.025 0.025395 0.008596

19 20 83.1 1723.5 164.3 35645.0 247.4 0.950 0.336 0.046 0.148541 0.038903

20 21 90.7 2224.7 484.2 34816.3 574.9 0.928 0.158 0.039 0.098281 0.027625

21 22 208.1 10431.2 381.0 26595.7 589.0 0.713 0.353 0.020 0.080047 0.018248

22 23 41.7 786.9 964.0 35823.3 1005.7 0.953 0.041 0.050 0.042977 0.015127

23 24 1760.6 3514.3 643.1 31697.9 2403.7 0.889 0.732 0.334 0.591214 0.268338

------ mean values --------> 0.261023 0.110556

-- mean values(>0) -> 34912.0 0.905 0.407 0.164 0.261023 0.110556

- Challenge metric...

(N= 43101) norm\_score:0.216584 observed:20112.823 correct:40640.232 inact:14437.780

Done.

cc =

Python tuple with no properties.

(0.6670100603140696, 0.1606858050637557, 0.1651933829841535, 0.21828830479714792, 0.26102319476049746, 0.11055604087650407, 0.21658444896393092)

>>