File - fingerprints

```
1 "C:\Users\Dragos\Roba\Lectures\YM1.2\Machine Learning\venv\Scripts\python.exe" "C:\Users\Dragos\Roba\Lectures\
  YM1.2\Machine Learning\b Labs\Lab8\fingerprints.py"
 3 1e-04
            2.377797e-01
                          9.30%
                                   0.3640
                                            0.4021
4 3e-04
                          9.35%
                                   0.3650
                                            0.4051
            2.391006e-01
 5 1e-03
            2.430980e-01
                          9.35%
                                   0.3650
                                            0.4130
                                            0.4297
 6 3e-03
            2.543260e-01
                          9.25%
                                   0.3641
7 1e-02
            2.815594e-01
                          9.25%
                                   0.3611
                                            0.4568
8 3e-02
            3.353240e-01
                          9.20%
                                   0.3621
                                            0.5805
9 1e-01
            4.198415e-01
                          9.25%
                                   0.3641
                                            0.8522
10 3e-01
            5.223593e-01
                          9.30%
                                   0.3640
                                            0.9950
11 1e+00
            6.107602e-01
                          9.25%
                                   0.3640
                                            1.0000
12 3e+00
            6.614700e-01
                          9.25%
                                   0.3640
                                            1.0000
                          9.50%
13 1e+01
            6.823806e-01
                                   0.3630
                                            1.0000
14 3e+01
            6.896594e-01
                          9.60%
                                   0.3620
                                            1.0000
15 1e+02
                          12.85%
                                    0.3620
                                             1.0000
            6.920354e-01
17 λ
                                    minDCF
                                                      \pi = 0.1
            J
                          err
                                             actDCF
18 1e-04
            1.295710e-01
                          16.85%
                                   0.3721
                                             0.4071
19 3e-04
            1.307709e-01
                          16.95%
                                   0.3701
                                             0.4010
20 1e-03
                          17.55%
            1.343060e-01
                                   0.3699
                                             0.4129
21 3e-03
            1.436651e-01
                          18.55%
                                   0.3670
                                             0.4327
22 1e-02
                          21.80%
                                    0.3630
            1.642912e-01
                                             0.4487
23 3e-02
            2.002131e-01
                          29.65%
                                   0.3640
                                             0.5964
24 1e-01
            2.473025e-01
                          46.10%
                                   0.3648
                                             0.9147
25 3e-01
            2.889006e-01
                          50.40%
                                    0.3640
                                             1.0000
26 1e+00
            3.117064e-01
                          50.40%
                                   0.3640
                                             1.0000
27 3e+00
            3.206240e-01
                          50.40%
                                    0.3630
                                             1.0000
28 1e+01
            3.236489e-01
                          50.40%
                                    0.3630
                                             1.0000
                          50.40%
29 3e+01
            3.246270e-01
                                    0.3620
                                             1.0000
30 1e+02
            3.249385e-01
                          50.40%
                                    0.3620
                                             1.0000
32 λ
            J
                          err
                                    minDCF
                                             actDCF
                                                      \pi = 0.1
33 1e-04
            1.513656e-01
                          6.05%
                                   0.2602
                                            0.2768
34 3e-04
            1.534955e-01
                          6.05%
                                   0.2612
                                            0.2656
35 1e-03
            1.596177e-01
                                            0.2765
                          5.95%
                                   0.2587
36 3e-03
                          5.90%
                                            0.2771
            1.751964e-01
                                   0.2527
37 1e-02
            2.086068e-01
                          5.90%
                                   0.2487
                                            0.3464
38 3e-02
            2.686447e-01
                          5.90%
                                   0.2436
                                            0.4972
39 1e-01
                                            0.7520
            3.594710e-01
                          6.05%
                                   0.2466
                          6.10%
40 3e-01
                                            0.9623
            4.716574e-01
                                   0.2629
41 1e+00
                          6.40%
                                            1.0000
            5.762647e-01
                                   0.2840
42 3e+00
                                            1.0000
            6.443501e-01
                          7.10%
                                   0.3090
43 1e+01
            6.758062e-01
                          7.10%
                                   0.3243
                                            1.0000
44 3e+01
            6.874324e-01
                          7.35%
                                   0.3263
                                            1.0000
45 1e+02
            6.913151e-01
                          9.30%
                                   0.3263
                                            1.0000
46
```

47 Process finished with exit code 0 48