A: Datasheet

Algorithm: smilart_0

Developer: Smilart

Submission Date: 2018_02_15

Template size: 1024 bytes

Template time (2.5 percentile): 154 msec

Template time (median): 169 msec

Template time (97.5 percentile): 183 msec

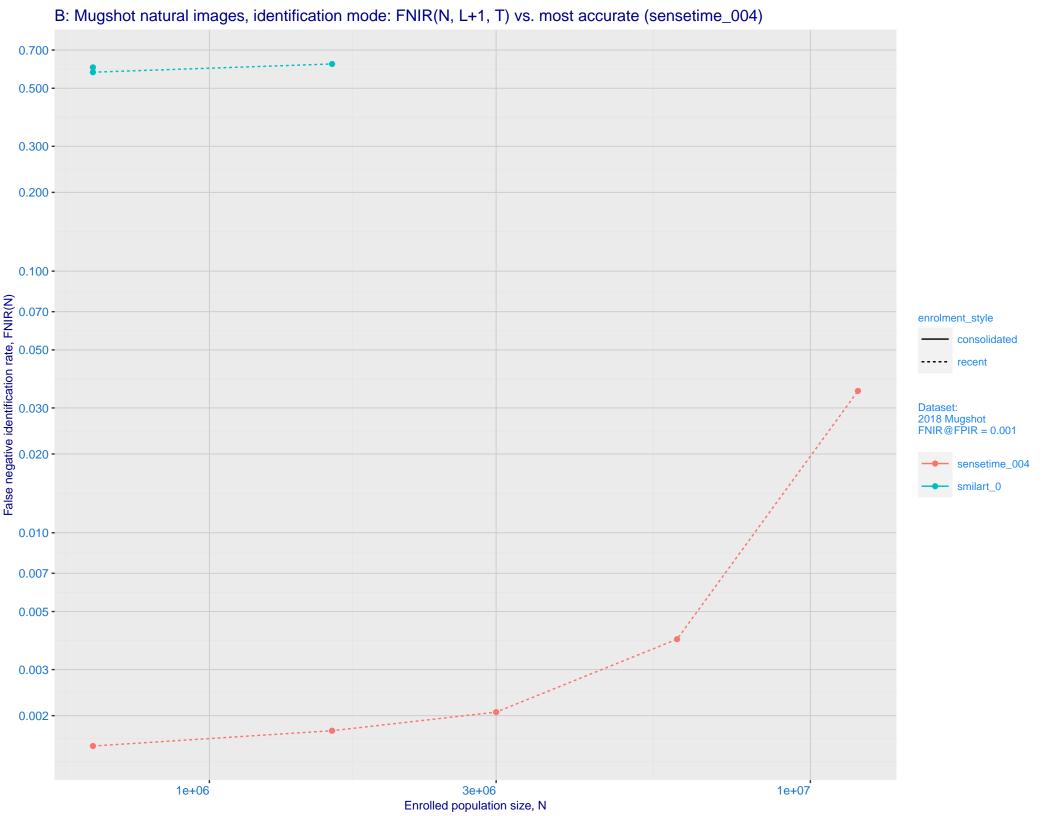
Investigation:

Frontal mugshot ranking 248 (out of 279) -- FNIR(1600000, 0, 1) = 0.1910 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 216 (out of 241) -- FNIR(1600000, 0, 1) = 0.3252 vs. lowest 0.0062 from sensetime_005

Identification:

Frontal mugshot ranking 242 (out of 279) -- FNIR(1600000, T, L+1) = 0.6192, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004



Date algorithm submitted to FRVT

D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 sensetime 004 0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.000 - 0.000 - 0.500 - 0.200 - 0. enrolment_style random-ONE-MATE recent-ONE-MATE 0.100 -0.070 -0.050 smilart 0 0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -False positive identification rate, FPIR(T)

E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

1e-04 -7e-05 -

0.4

0.5

0.6

0.7

0.8

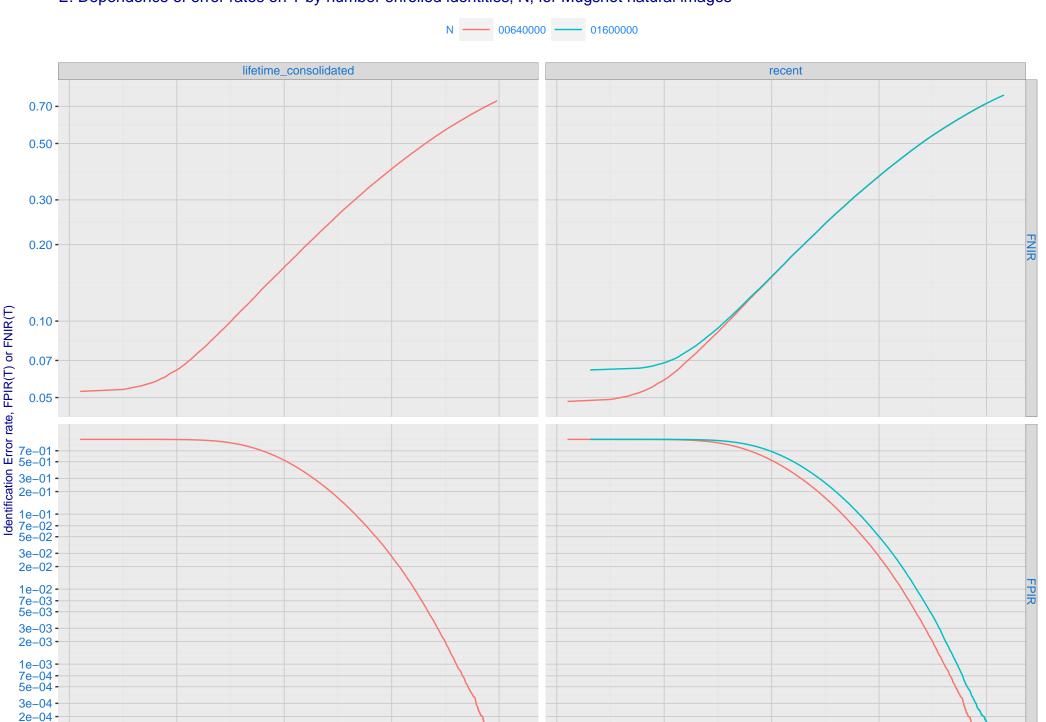
0.4

Threshold

0.5

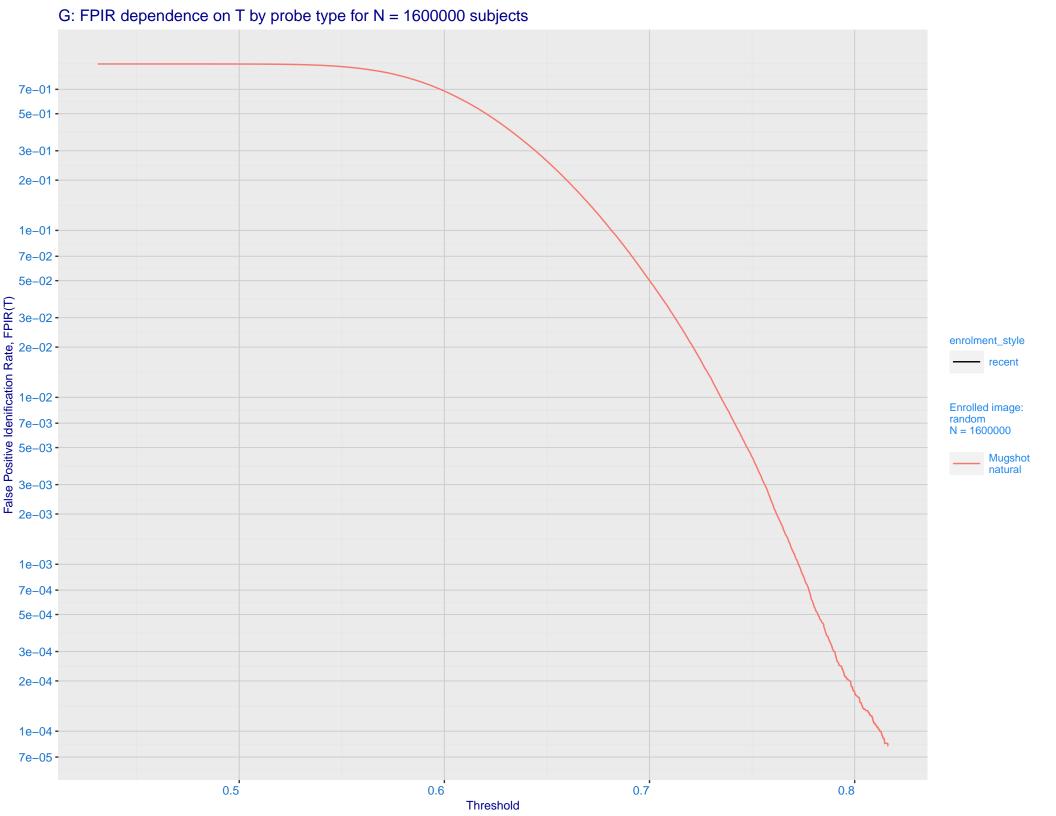
0.6

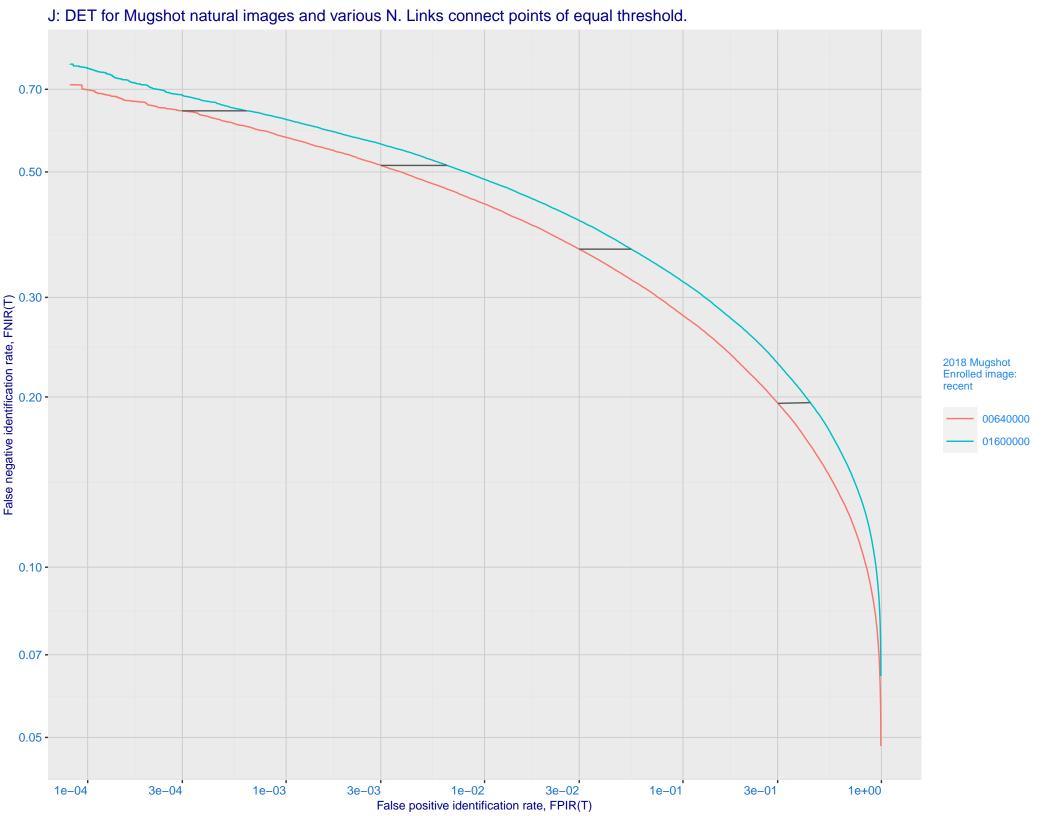
0.7



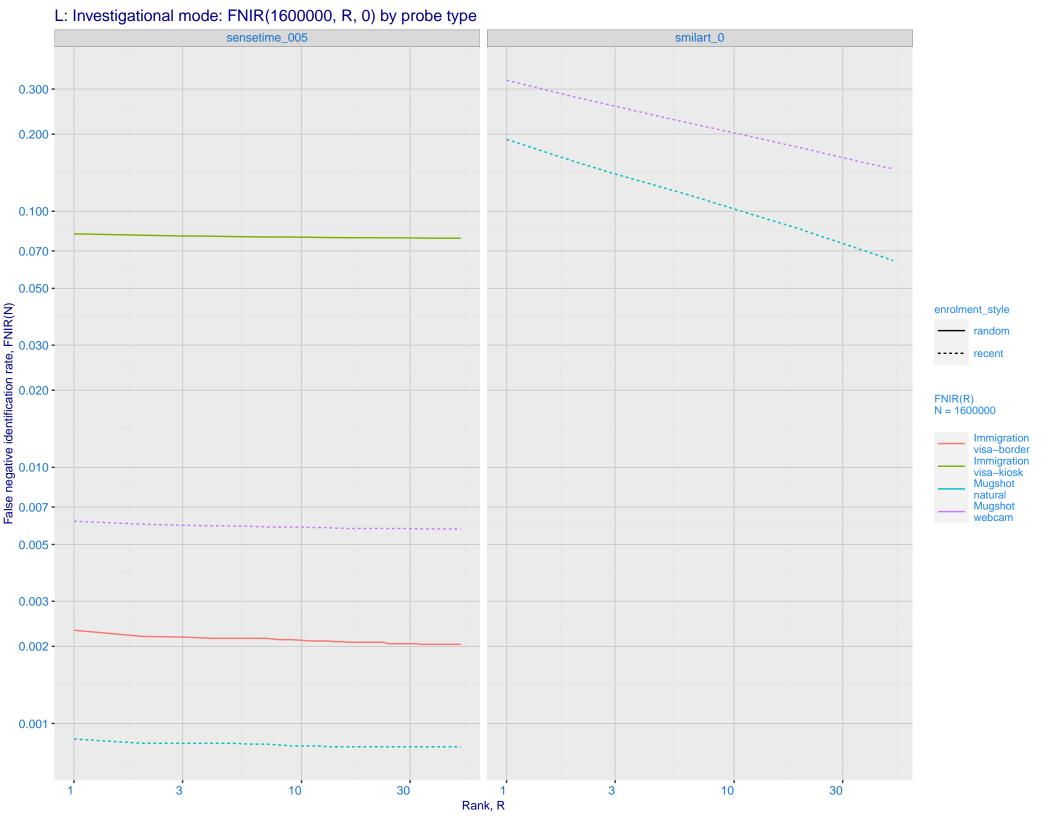
0.8

F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 - 2e-01 - 3e-01 - 3e-01 - 3e-01 - 7e-02 - 3e-02 Enrolled images: recent N = 1600000 Mugshot natural 3e-02 -2e-02 -1e-02 -7e-03 -5e-03 -3e-03 -2e-03 -1e-03 -7e-04 -5e-04 -3e-04 -2e-04 -1e-04 -1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)

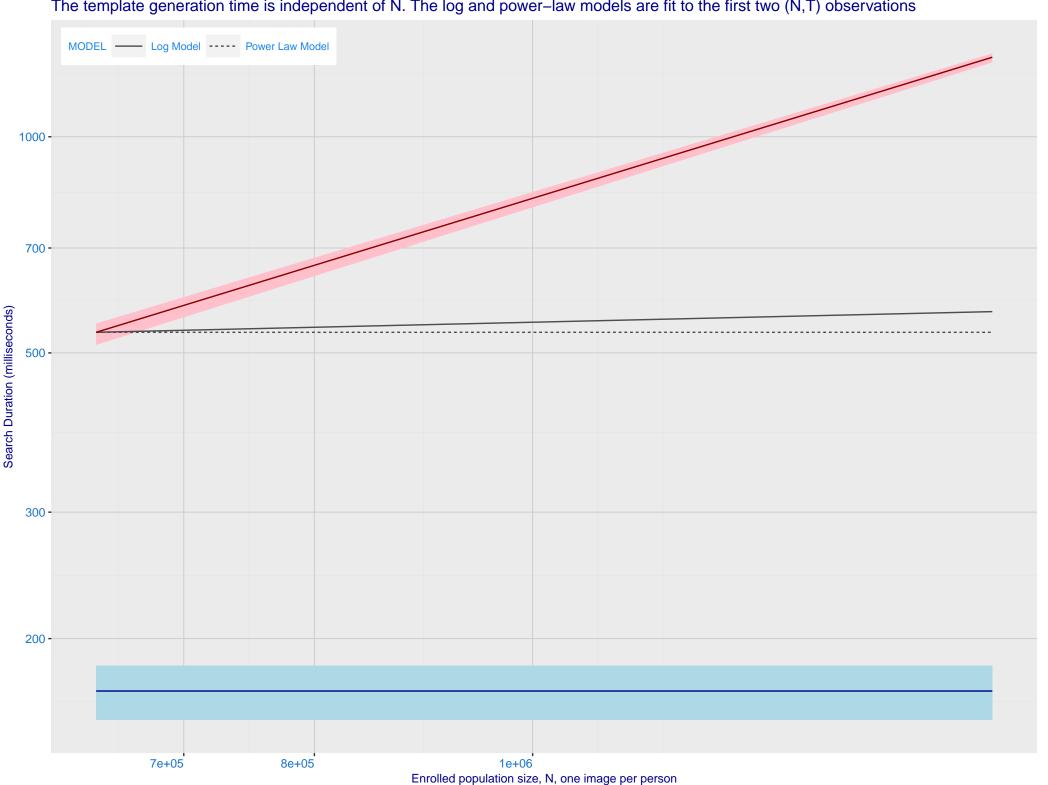




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Ealse negative identification rate, FNIR(N) 0.003 - 0.001 - 0.300 - 0.100 - 0. enrolment_style consolidated ---- random --- recent Mugshot webcam Mugshot natural FNIR@Rank = 1 sensetime_005 smilart_0 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -1e+06 3e+06 1e+07 1e+06 3e+06 1e+07 Enrolled population size, N



M: Template duration; search duration vs. N. The blue and pink ribbon covers 95 percent of observed measurements. The template generation time is independent of N. The log and power–law models are fit to the first two (N,T) observations



Q: Identification FNIR(N, T, L+1) and Investigational FNIR(N, 0, R) under ageing



