A: Datasheet

Algorithm: noblis_2

Developer: Noblis

Submission Date: 2018_10_30

Template size: 6144 bytes

Template time (2.5 percentile): 506 msec

Template time (median): 517 msec

Template time (97.5 percentile): 592 msec

Investigation:

Frontal mugshot ranking 228 (out of 259) -- FNIR(1600000, 0, 1) = 0.1794 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 203 (out of 221) -- FNIR(1600000, 0, 1) = 0.3923 vs. lowest 0.0062 from sensetime_005

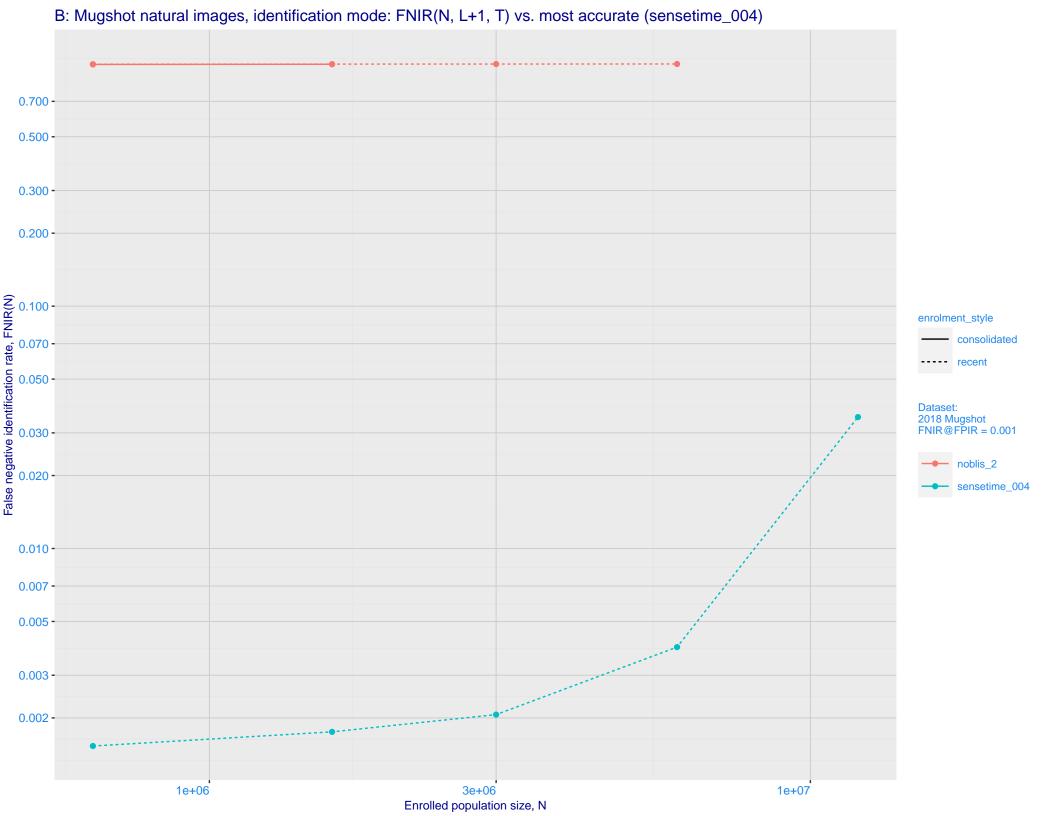
Mugshot profile ranking 176 (out of 190) -- FNIR(1600000, 0, 1) = 0.9815 vs. lowest 0.0591 from sensetime_005

Identification:

Frontal mugshot ranking 253 (out of 259) -- FNIR(1600000, T, L+1) = 0.9972, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 217 (out of 219) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 170 (out of 189) -- FNIR(1600000, T, L+1) = 0.9999, FPIR=0.001000 vs. lowest 0.1733 from sensetime_005



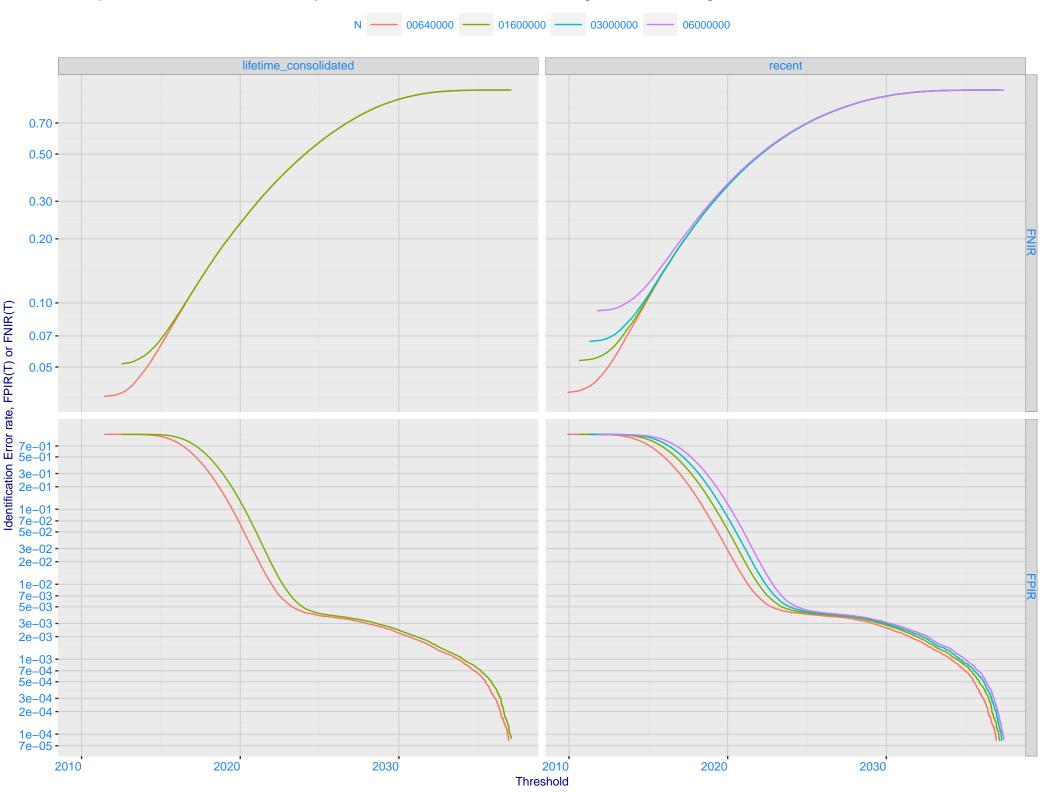
Mugshot–Webcam

Date algorithm submitted to FRVT

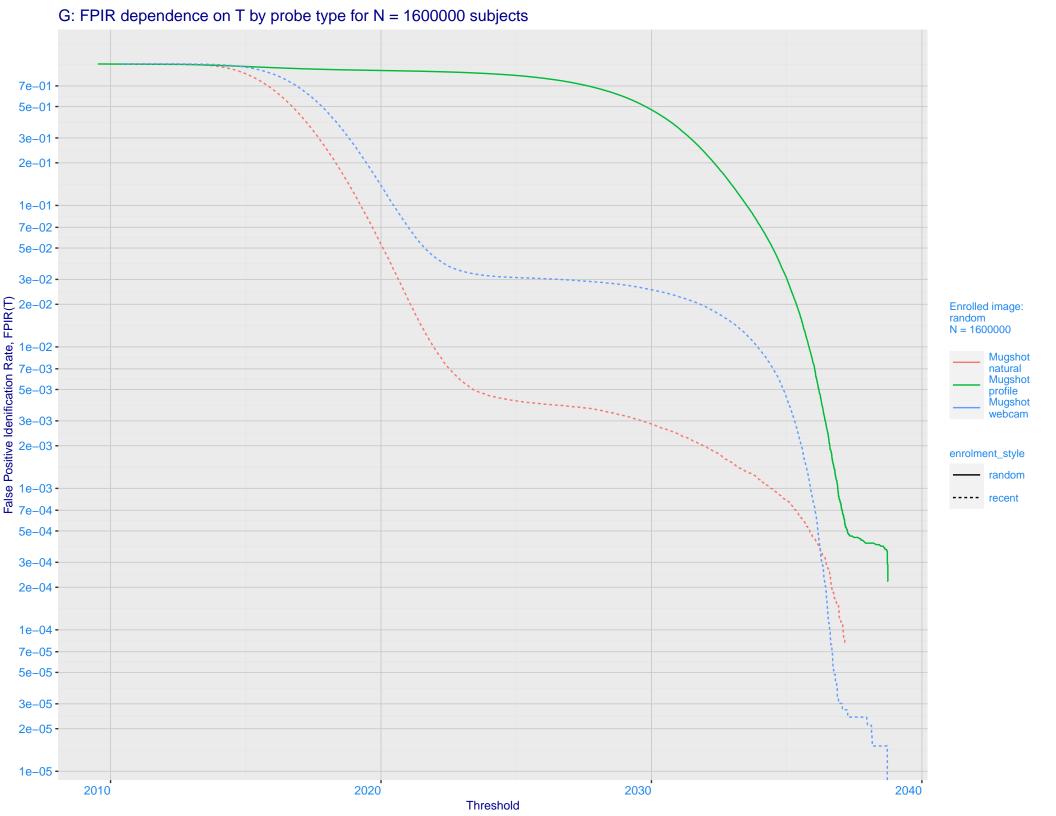
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration Immigration** Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment_style consolidated-ONE-MATE random-ONE-MATE recent-ONE-MATE unconsolidated-ALL-MATES unconsolidated-ANY-MATE 0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -

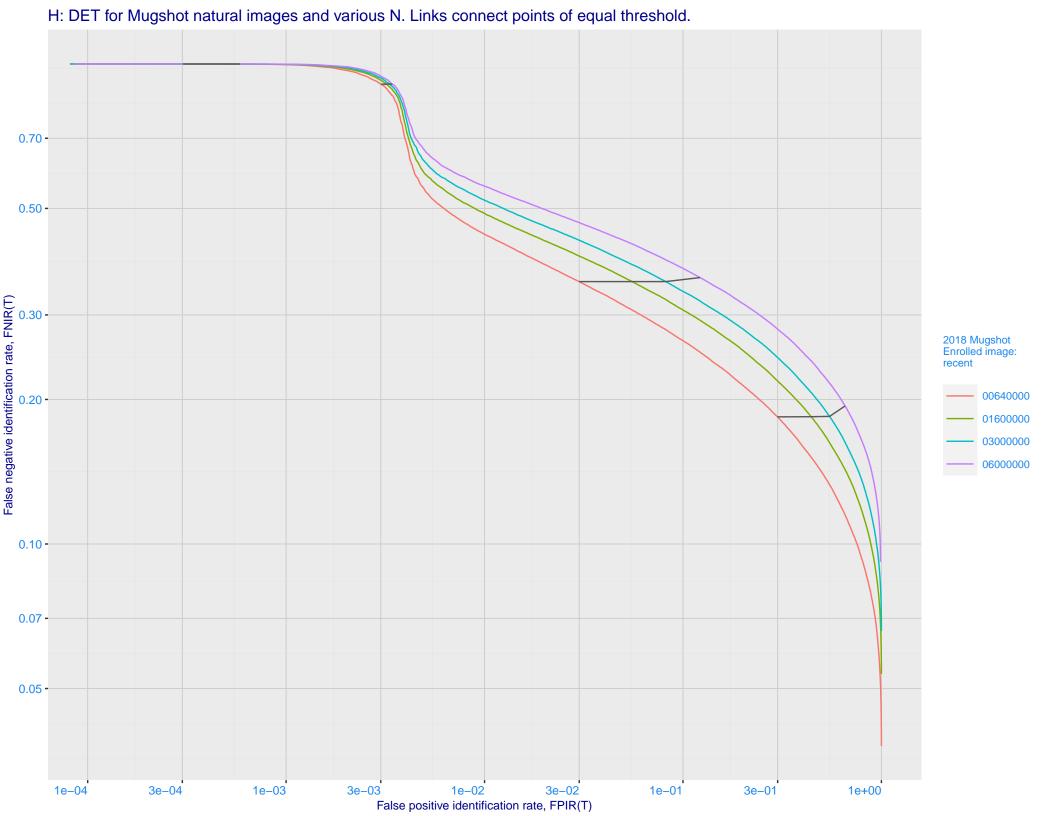
False positive identification rate, FPIR(T)

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

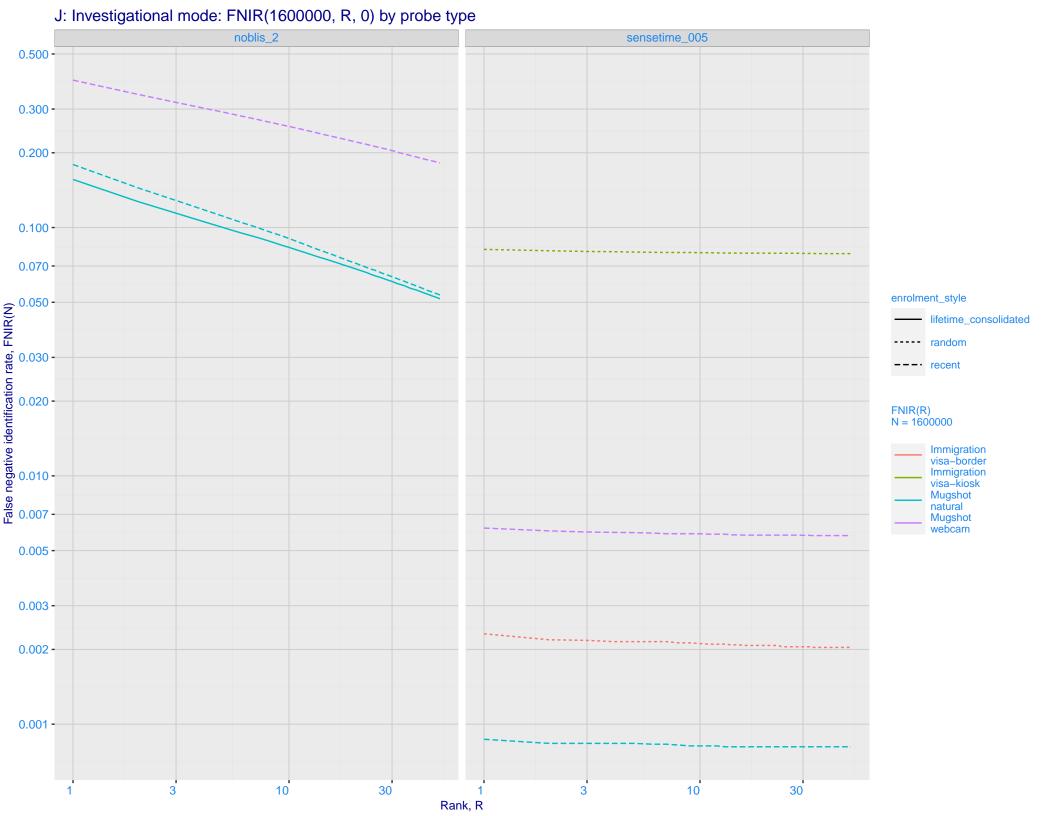


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 - 5e-02 -**Enrolled images:** recent N = 1600000 % 3e-02 - 2e-02 - 1e-02 -Mugshot natural Mugshot webcam 7e-03 -5e-03 -3e-03 -2e-03 -1e-03 -7e-04 -5e-04 -3e-04 -2e-04 -1e-04 -7e-05 -5e-05 -3e-05 -2e-05 -1e-05 -1e-05 3e-05 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)

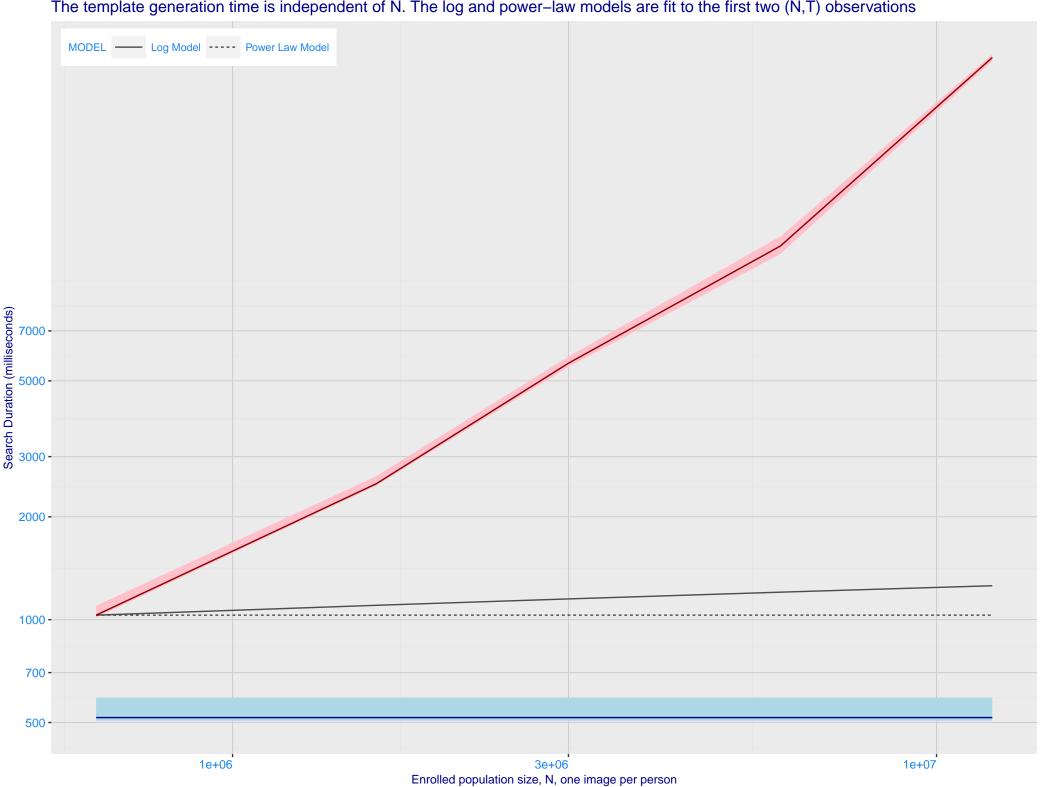




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Palse negative identification rate, FNIR(N) 0.003 - 0.001 - 0.500 - 0.200 - 0.100 - 0. enrolment_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 noblis_2 sensetime_005 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



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



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

