## A: Datasheet

Algorithm: noblis\_1

Developer: Noblis

Submission Date: 2018\_10\_30

Template size: 2048 bytes

Template time (2.5 percentile): 197 msec

Template time (median): 207 msec

Template time (97.5 percentile): 230 msec

Investigation:

Frontal mugshot ranking 246 (out of 265) -- FNIR(1600000, 0, 1) = 0.2492 vs. lowest 0.0009 from sensetime\_005

Mugshot webcam ranking 214 (out of 227) -- FNIR(1600000, 0, 1) = 0.5224 vs. lowest 0.0062 from sensetime\_005

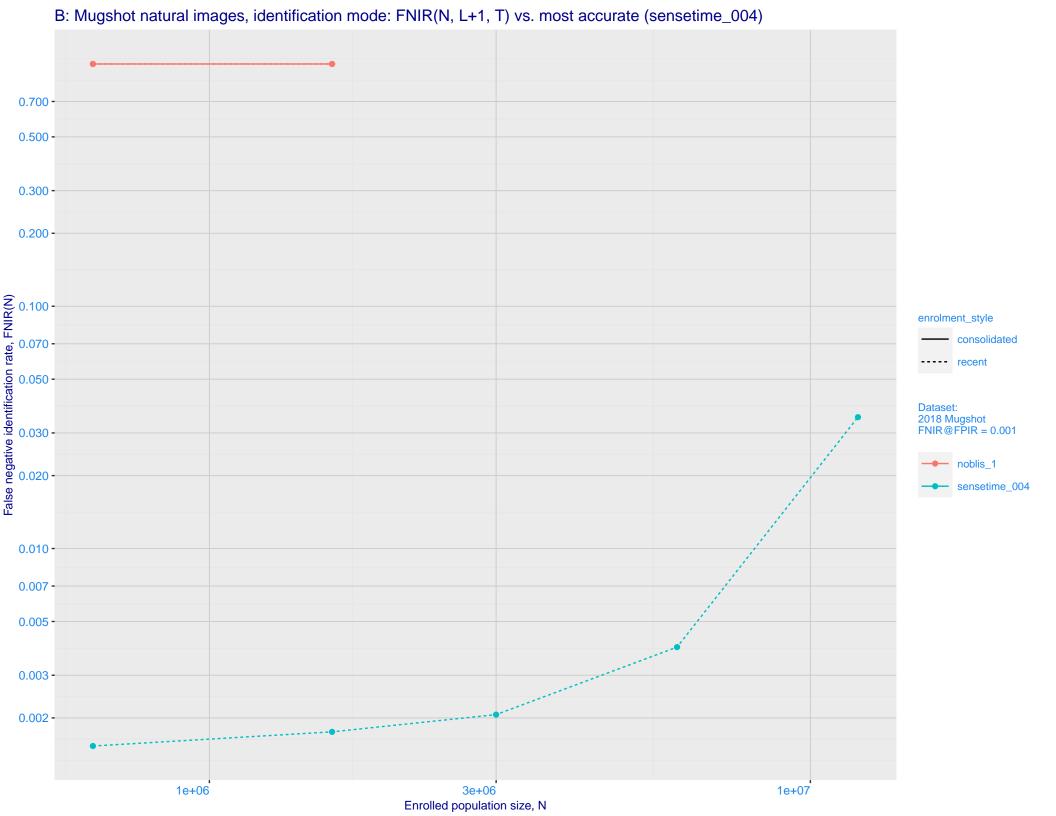
Mugshot profile ranking 191 (out of 196) -- FNIR(1600000, 0, 1) = 0.9935 vs. lowest 0.0591 from sensetime\_005

Identification:

Frontal mugshot ranking 263 (out of 265) -- FNIR(1600000, T, L+1) = 0.9996, FPIR=0.001000 vs. lowest 0.0018 from sensetime\_004

Mugshot webcam ranking 223 (out of 225) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.0122 from sensetime\_003

Mugshot profile ranking 176 (out of 195) -- FNIR(1600000, T, L+1) = 0.9999, FPIR=0.001000 vs. lowest 0.1331 from hr\_000



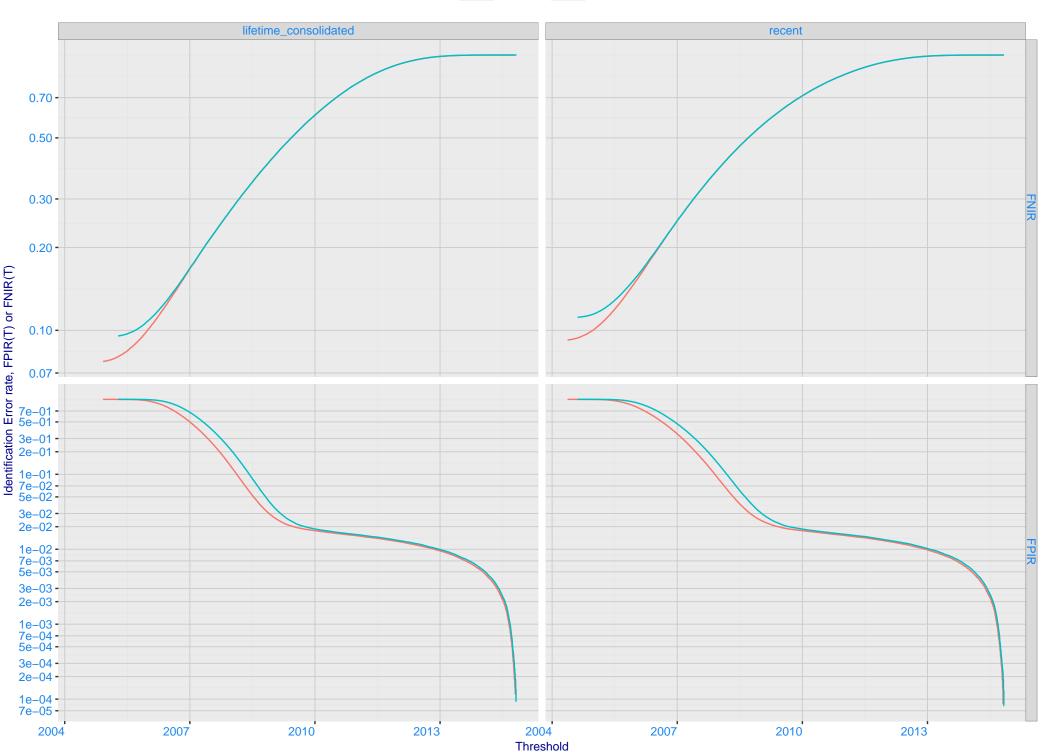
Mugshot–Webcam

Date algorithm submitted to FRVT

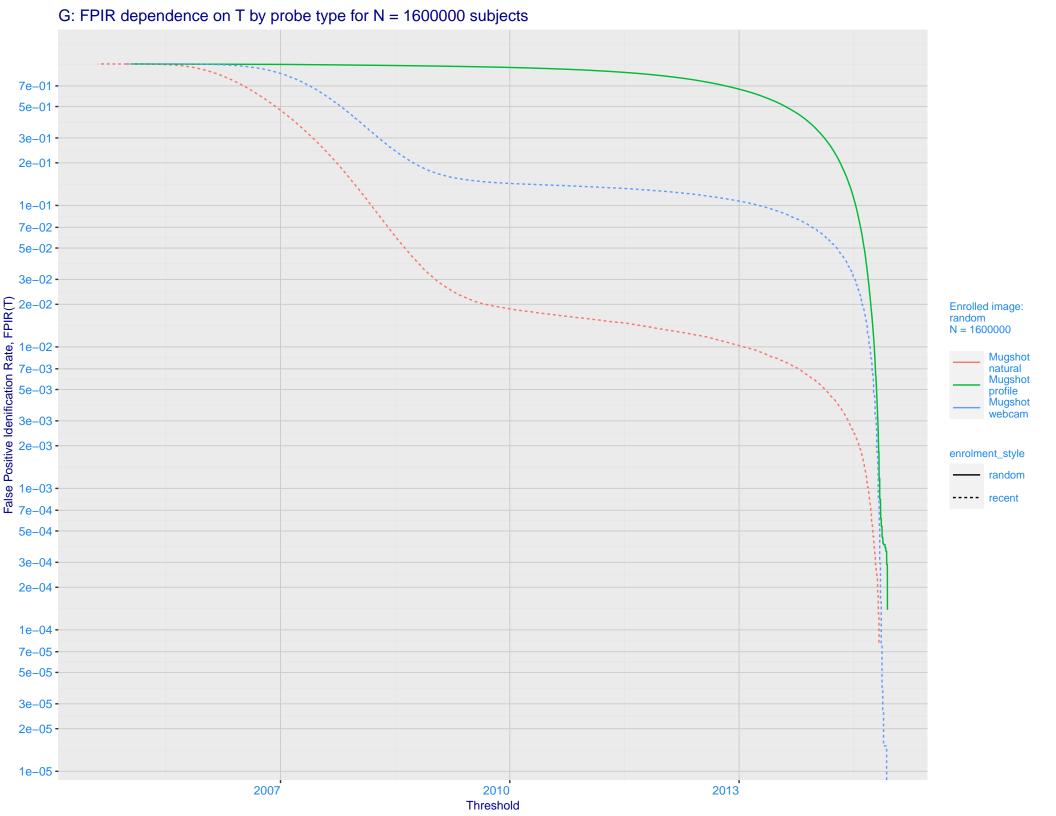
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration Immigration** Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment\_style 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 -

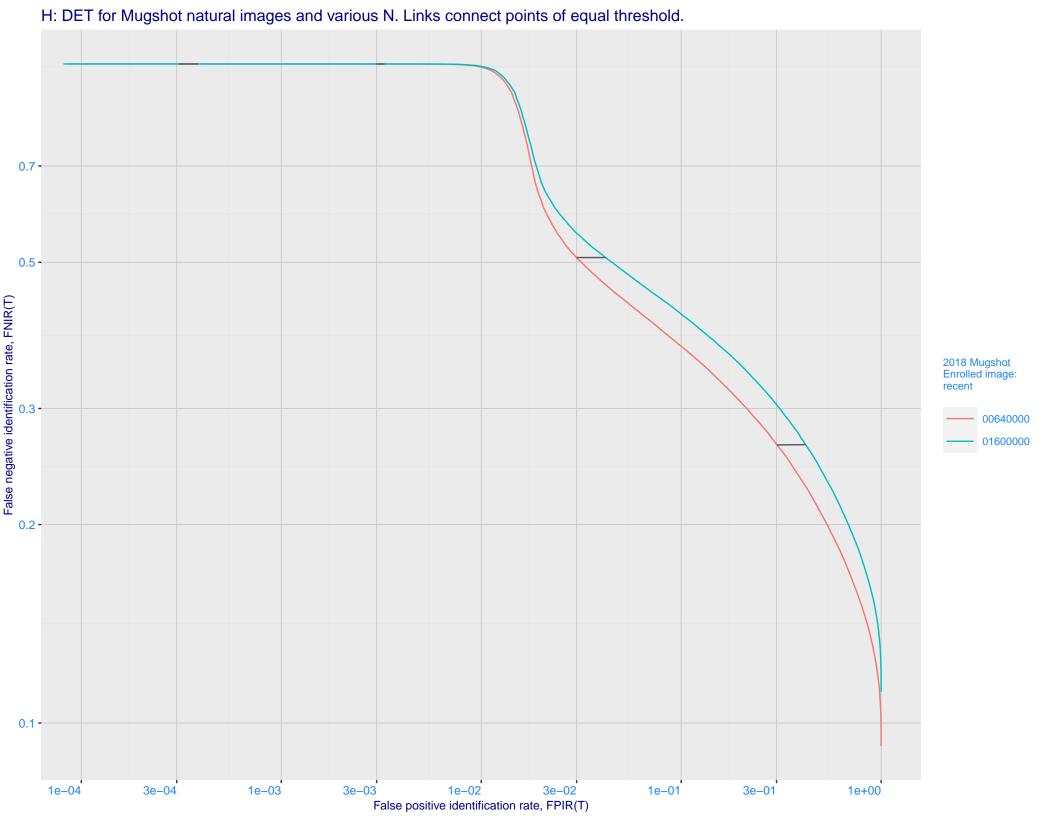
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



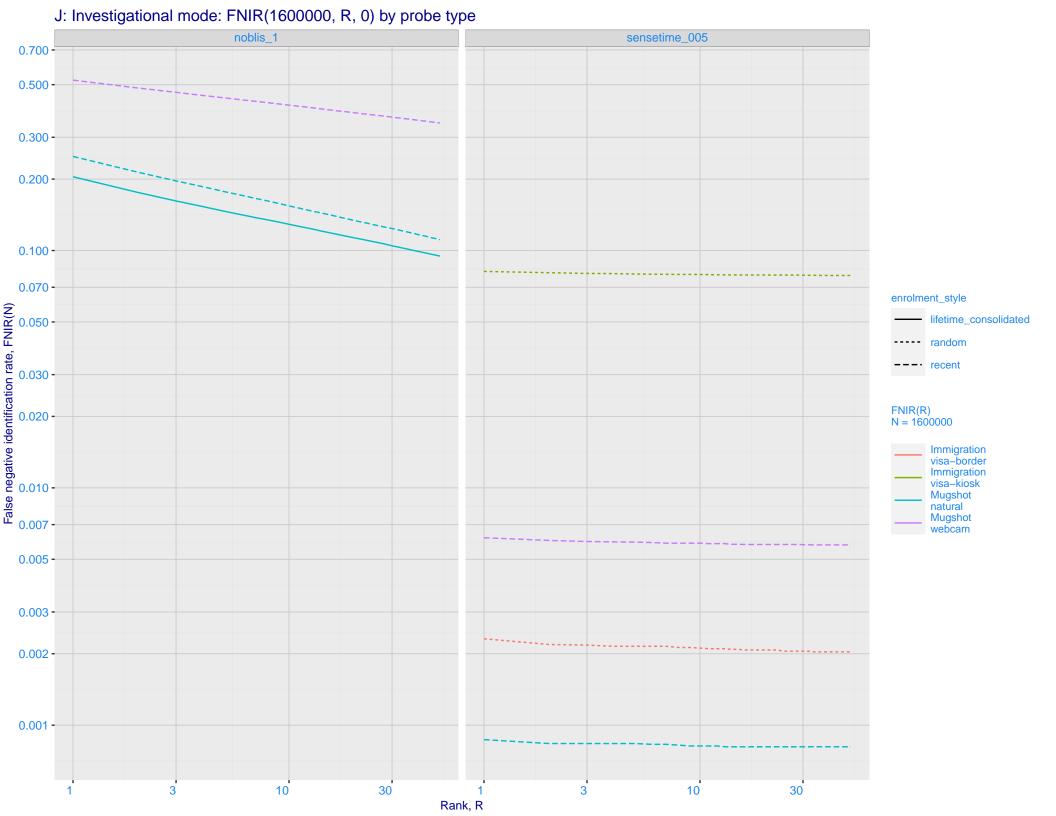


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 - 7e-02 **Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam 7e-03 -5e-03 -3e-03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

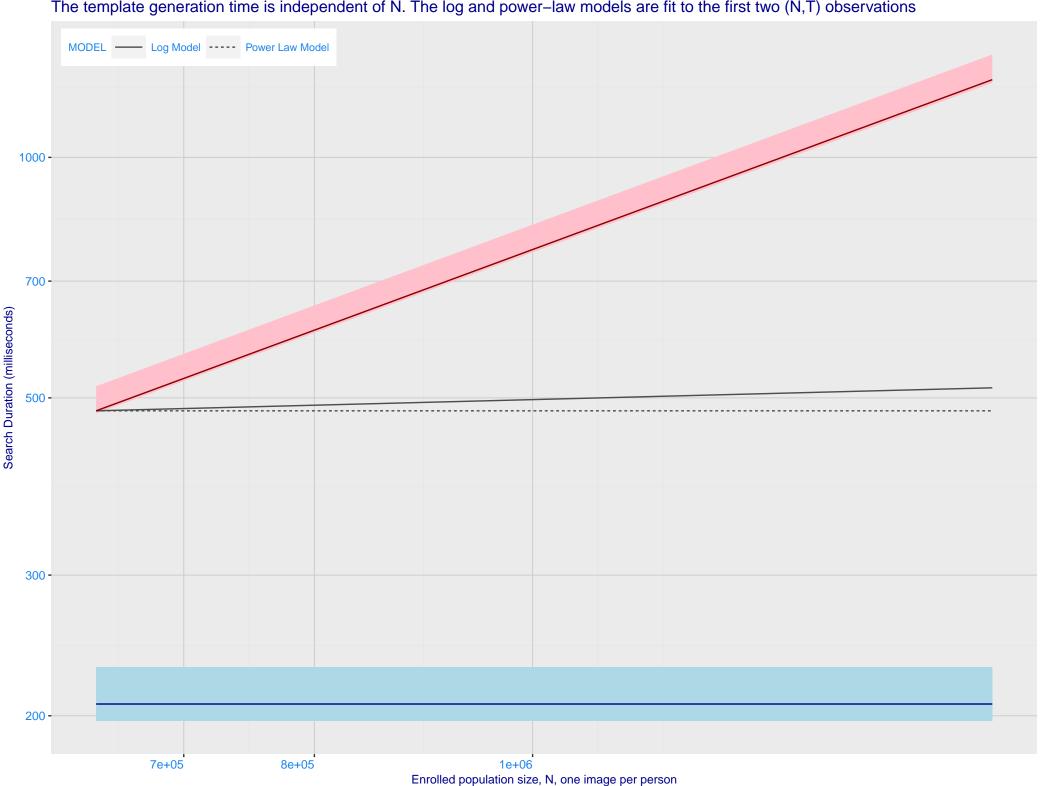




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime\_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Ealse negative identification rate, FNIR(N) 0.003 - 0.001 - 0.700 - 0.500 - 0.200 - 0. enrolment\_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 noblis\_1 sensetime\_005 0.100 -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



