A: Datasheet

Algorithm: allgovision_000

Developer: AllGoVision

Submission Date: 2019_07_30

Template size: 2048 bytes

Template time (2.5 percentile): 381 msec

Template time (median): 405 msec

Template time (97.5 percentile): 631 msec

Investigation:

Frontal mugshot ranking 137 (out of 265) -- FNIR(1600000, 0, 1) = 0.0114 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 115 (out of 227) -- FNIR(1600000, 0, 1) = 0.0332 vs. lowest 0.0062 from sensetime_005

Mugshot profile ranking 112 (out of 196) — FNIR(1600000, 0, 1) = 0.8938 vs. lowest 0.0591 from sensetime_005

Immigration visa-border ranking 76 (out of 148) -- FNIR(1600000, 0, 1) = 0.0208 vs. lowest 0.0013 from visionlabs_010

Immigration visa-kiosk ranking 96 (out of 145) -- FNIR(1600000, 0, 1) = 0.2817 vs. lowest 0.0568 from hr_000

Identification:

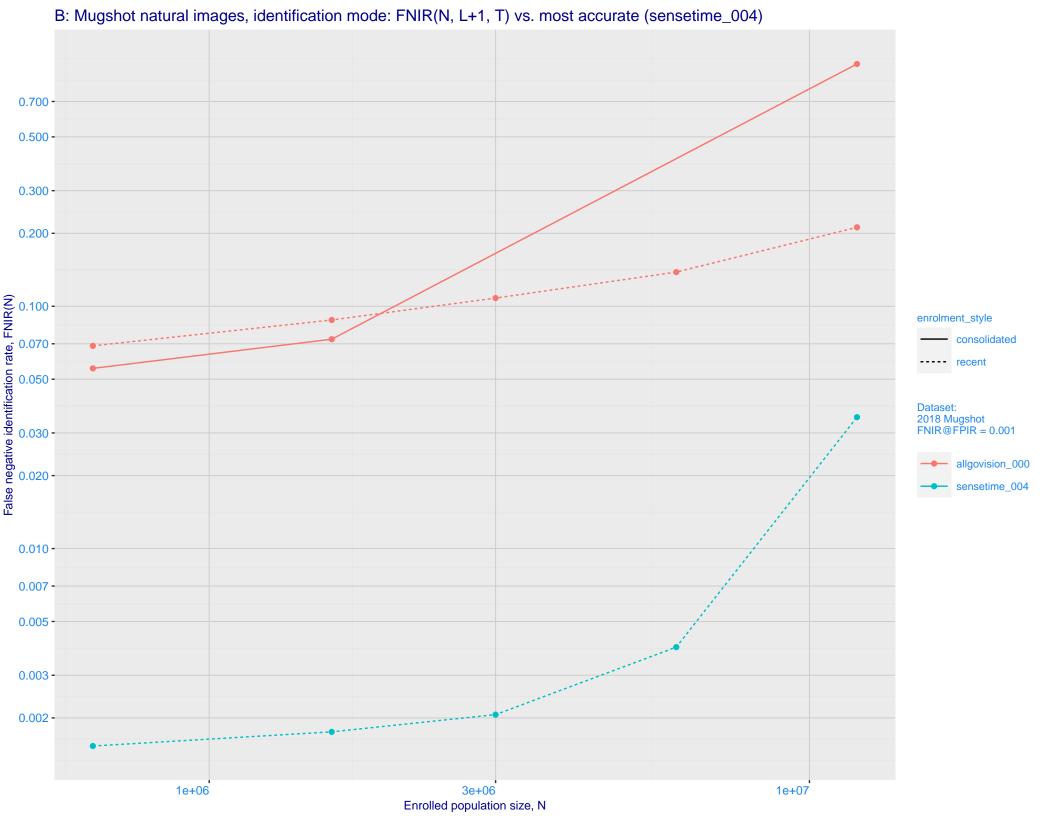
Frontal mugshot ranking 126 (out of 265) -- FNIR(1600000, T, L+1) = 0.0878, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

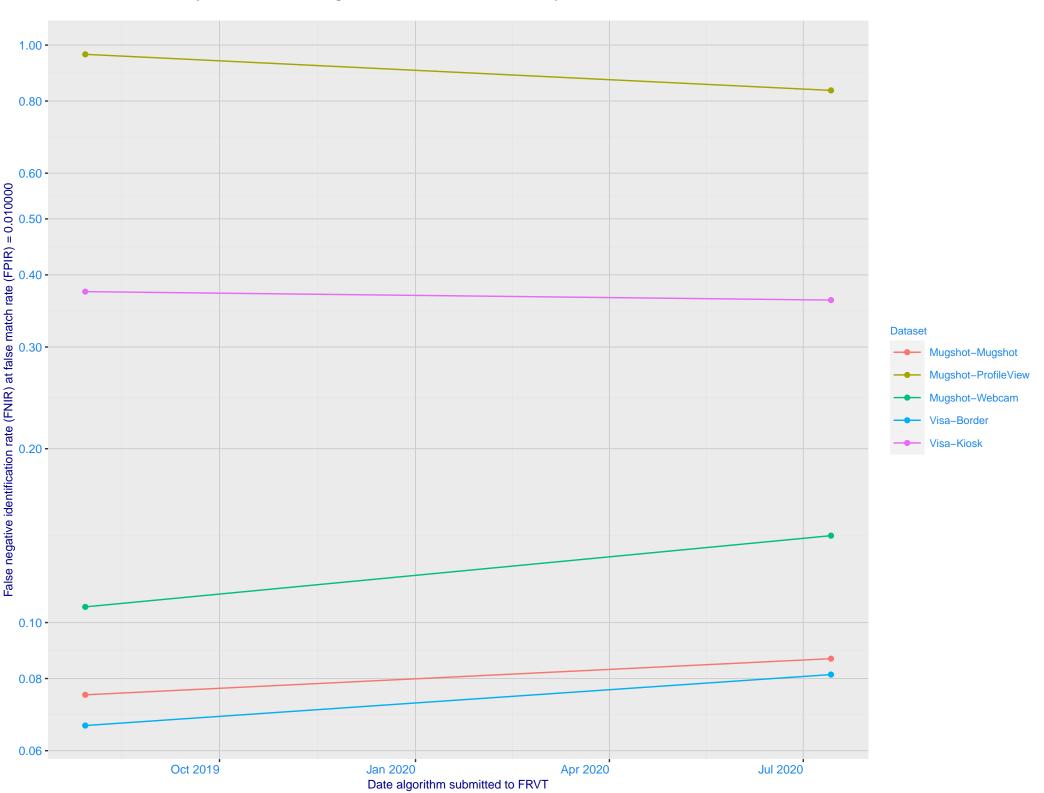
Mugshot webcam ranking 118 (out of 225) -- FNIR(1600000, T, L+1) = 0.1659, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 80 (out of 195) -- FNIR(1600000, T, L+1) = 0.9903, FPIR=0.001000 vs. lowest 0.1331 from hr_000

Immigration visa-border ranking 70 (out of 146) -- FNIR(1600000, T, L+1) = 0.1178, FPIR=0.001000 vs. lowest 0.0049 from hr_000

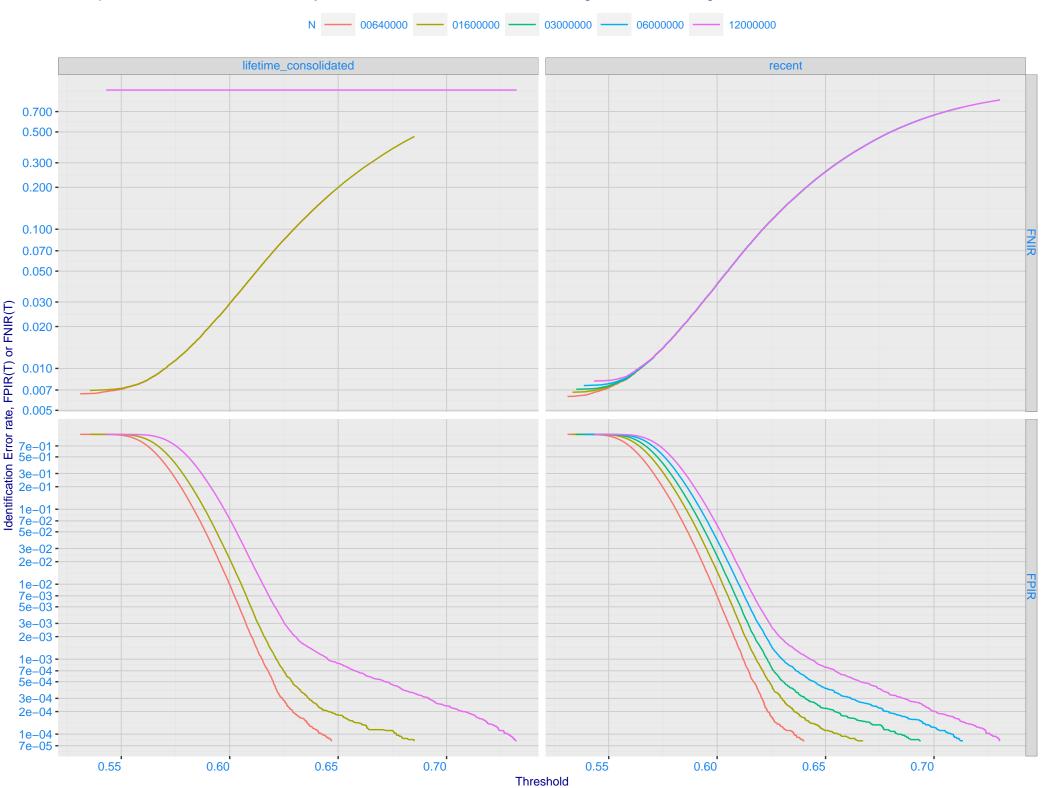
Immigration visa-kiosk ranking 67 (out of 141) -- FNIR(1600000, T, L+1) = 0.5268, FPIR=0.001000 vs. lowest 0.0996 from hr_000



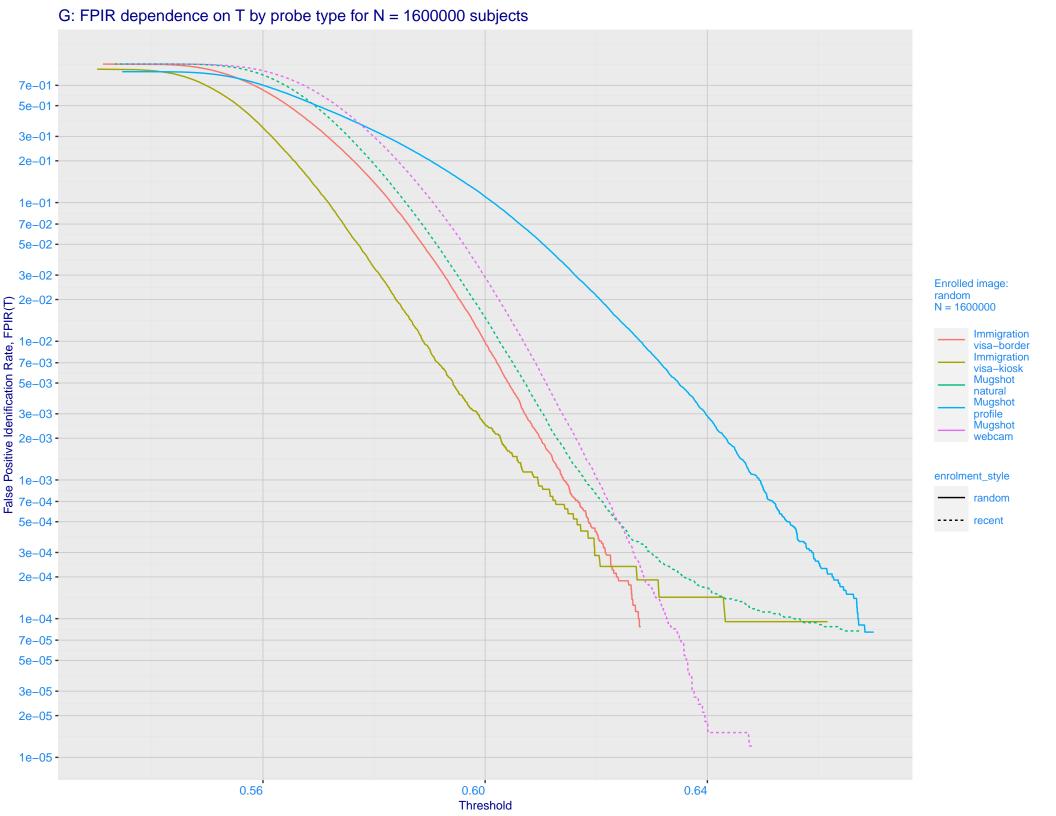


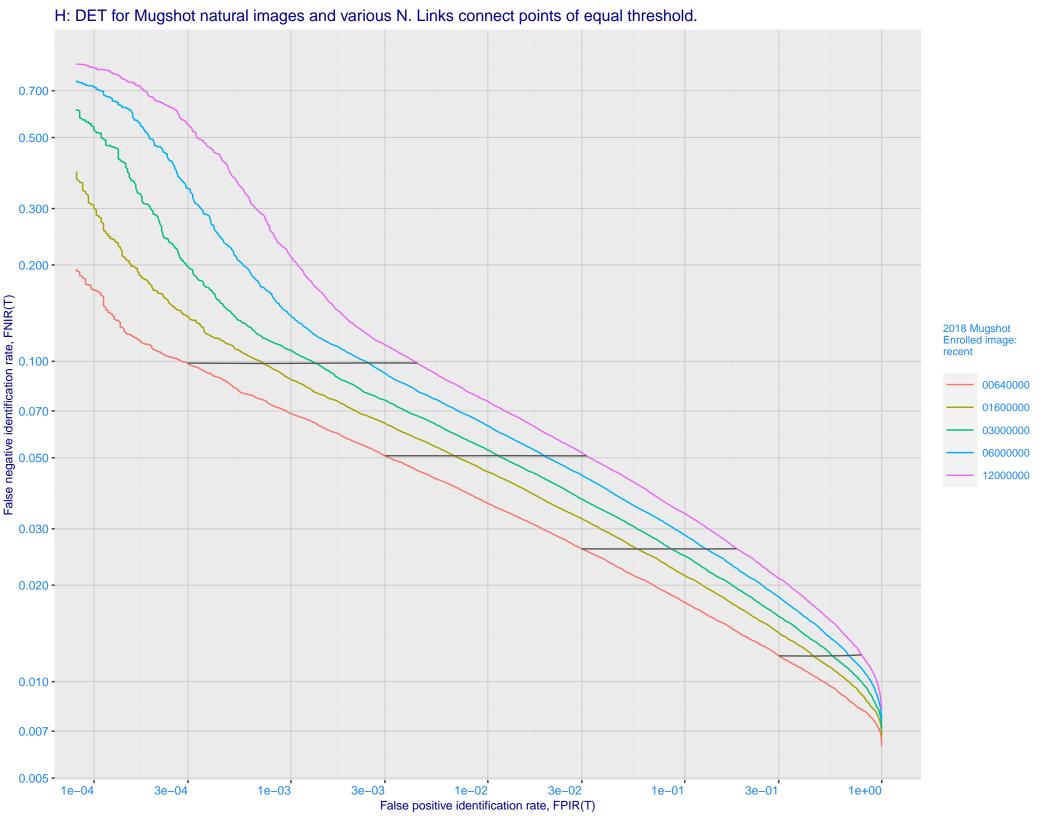
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration Immigration** Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.000 - 0.000 - 0.500 - 0.200 - 0. 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 -5e-02 -3e-02 -3e-02 -1e-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)

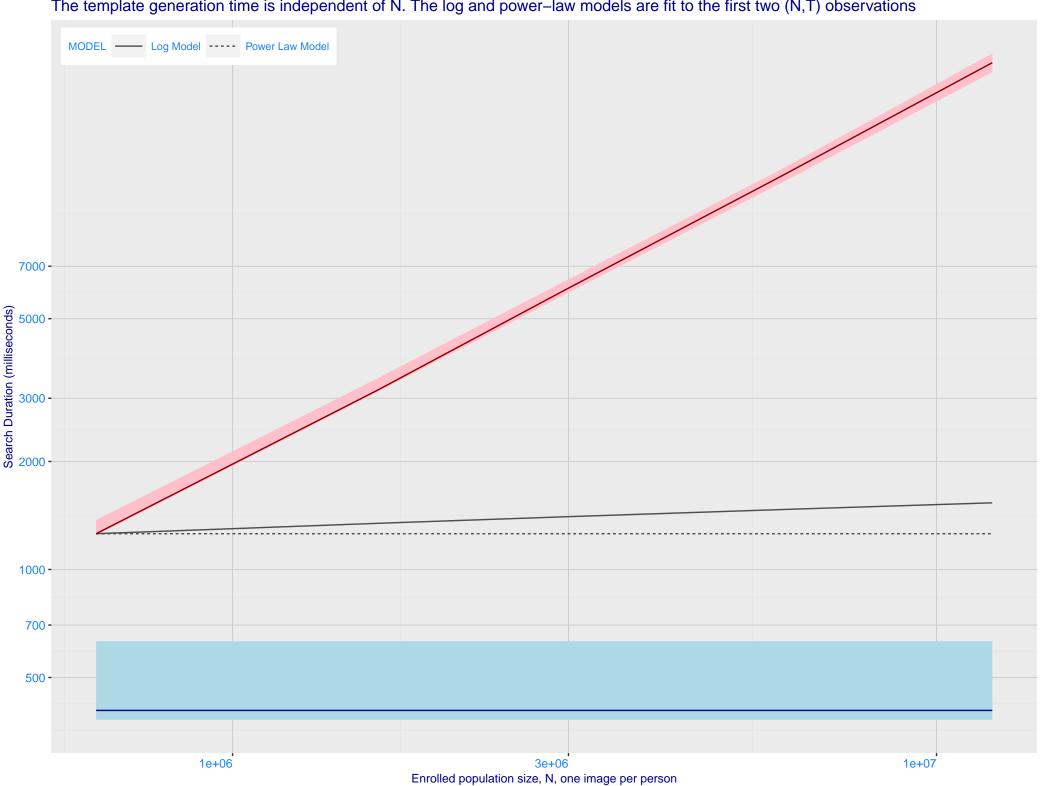




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -• 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 - 0.003 - 0.002 - 0.001 - 0.001 - 0.000 - 0.300 - 0.200 enrolment_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 allgovision_000 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

J: Investigational mode: FNIR(1600000, R, 0) by probe type allgovision_000 sensetime_005 0.300 -0.200 -0.100 -0.070 -0.050 enrolment_style False negative identification rate, FNIR(N) - 0.030 - 0.000 - 0.007 - lifetime_consolidated ---- random --- recent FNIR(R) N = 1600000 Immigration visa-border Immigration visa-kiosk Mugshot natural Mugshot webcam 0.005 -0.003 -0.002 -0.001 -10 30 3 10 30 Rank, R

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



