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 149 (out of 279) -- FNIR(1600000, 0, 1) = 0.0114 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 127 (out of 241) -- FNIR(1600000, 0, 1) = 0.0332 vs. lowest 0.0062 from sensetime_005

Mugshot profile ranking 125 (out of 210) — FNIR(1600000, 0, 1) = 0.8938 vs. lowest 0.0587 from xforwardai_002

Immigration visa-border ranking 90 (out of 168) -- FNIR(1600000, 0, 1) = 0.0208 vs. lowest 0.0013 from visionlabs_010

Immigration visa-kiosk ranking 113 (out of 165) -- FNIR(1600000, 0, 1) = 0.2817 vs. lowest 0.0568 from cloudwalk_hr_000

Identification:

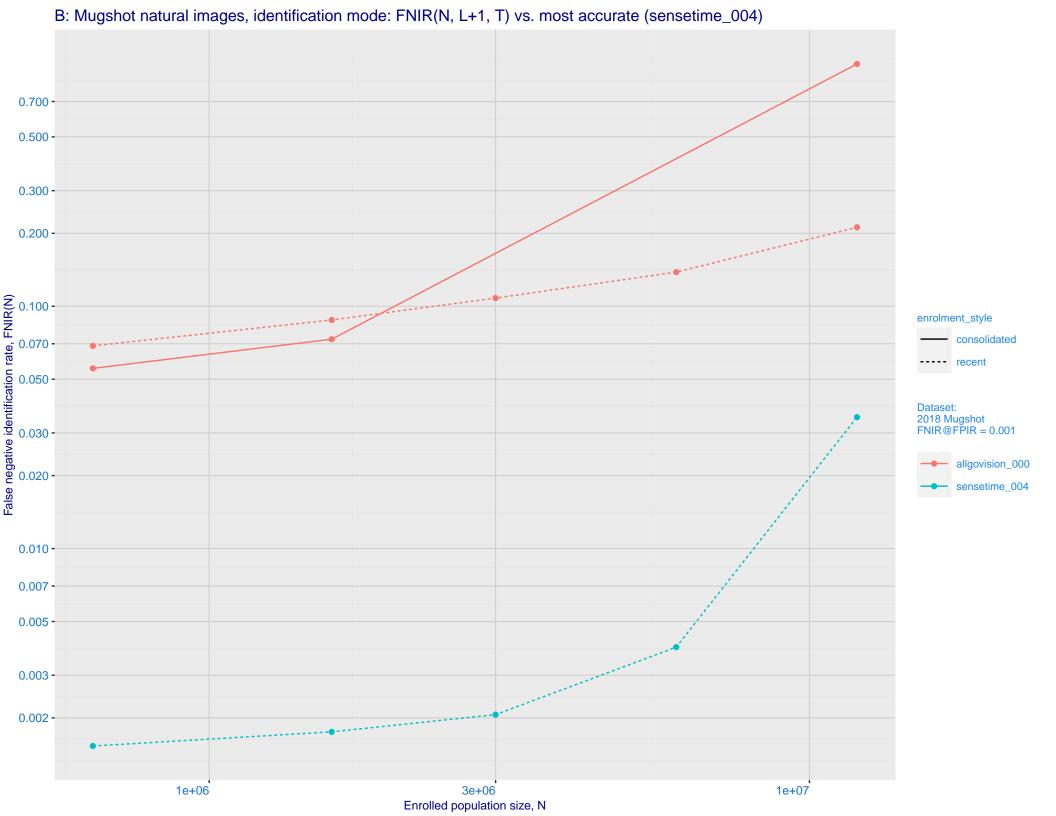
Frontal mugshot ranking 138 (out of 279) -- FNIR(1600000, T, L+1) = 0.0878, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

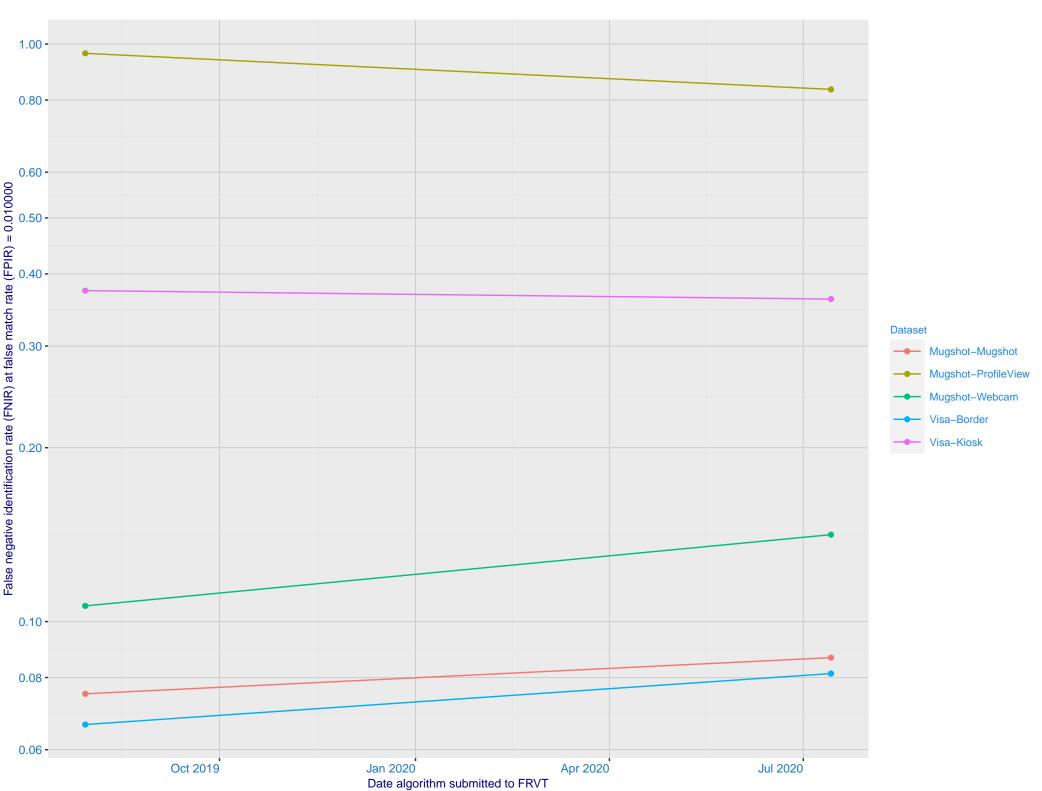
Mugshot webcam ranking 128 (out of 236) -- FNIR(1600000, T, L+1) = 0.1659, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 87 (out of 209) -- FNIR(1600000, T, L+1) = 0.9903, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000

Immigration visa-border ranking 83 (out of 167) -- FNIR(1600000, T, L+1) = 0.1178, FPIR=0.001000 vs. lowest 0.0047 from idemia_008

Immigration visa-kiosk ranking 77 (out of 162) — FNIR(1600000, T, L+1) = 0.5268, FPIR=0.001000 vs. lowest 0.0996 from cloudwalk_hr_000

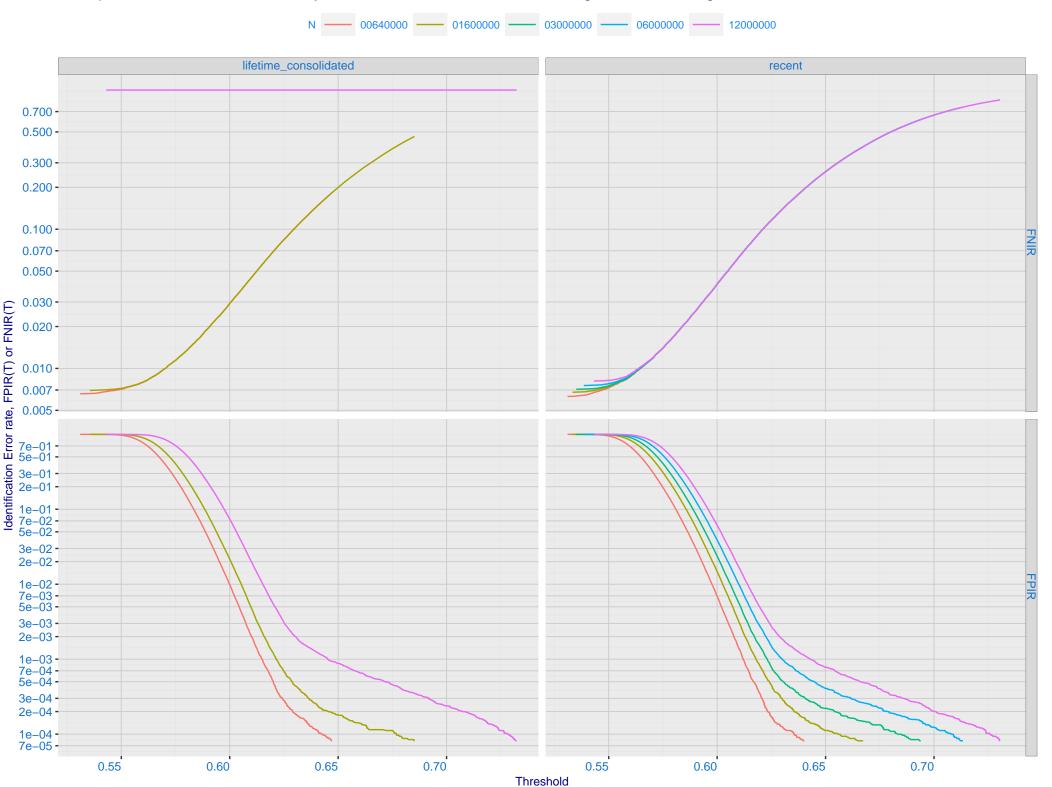




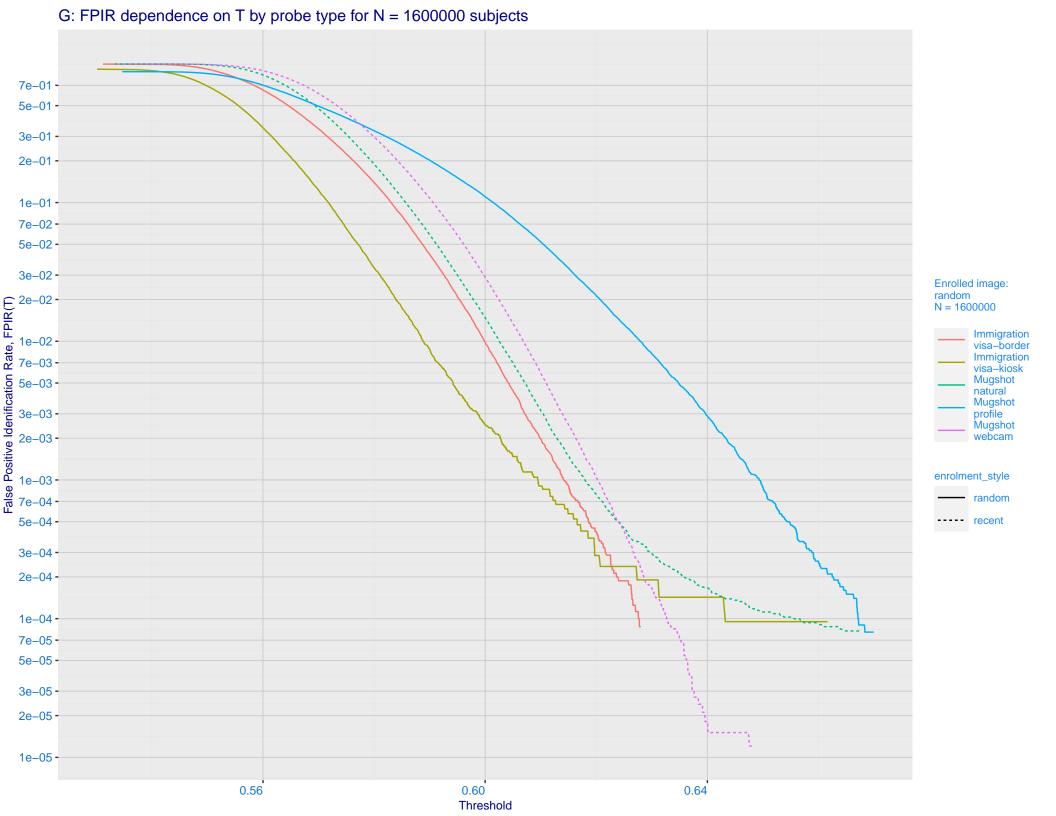
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration **Immigration** Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 allgovision 000 0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.000 - 0.000 - 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 sensetime 004 0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -

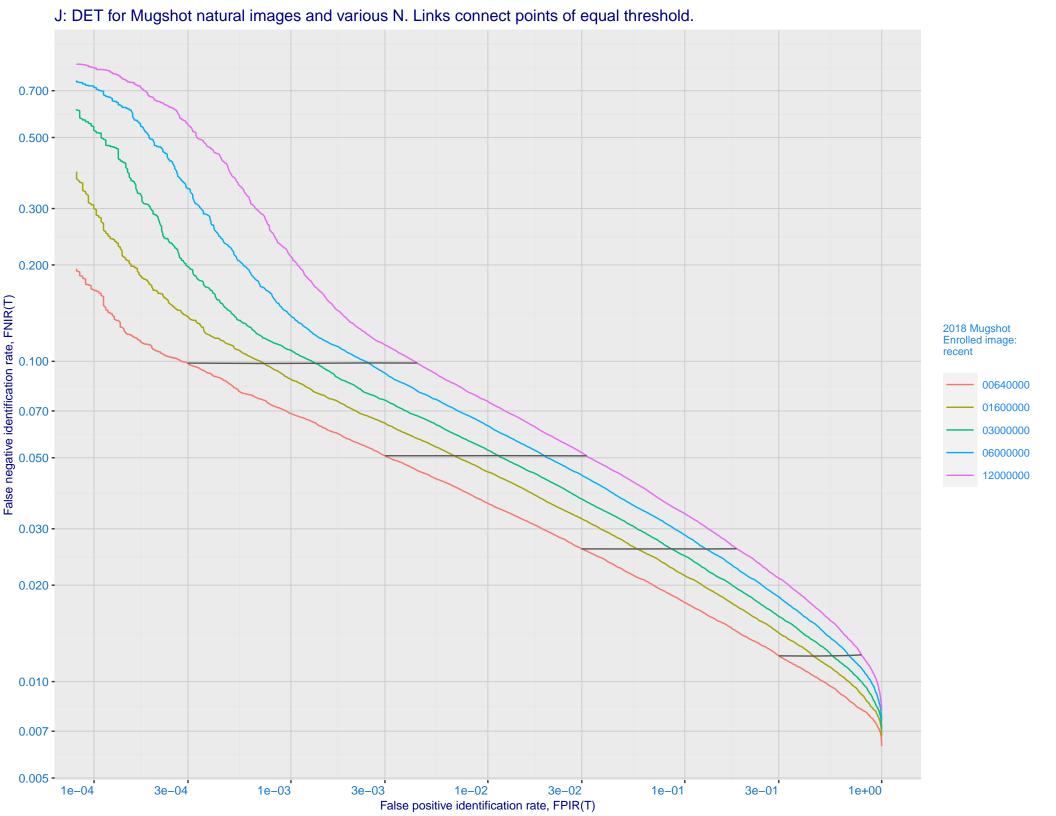
False positive identification rate, FPIR(T)

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 -5e-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)

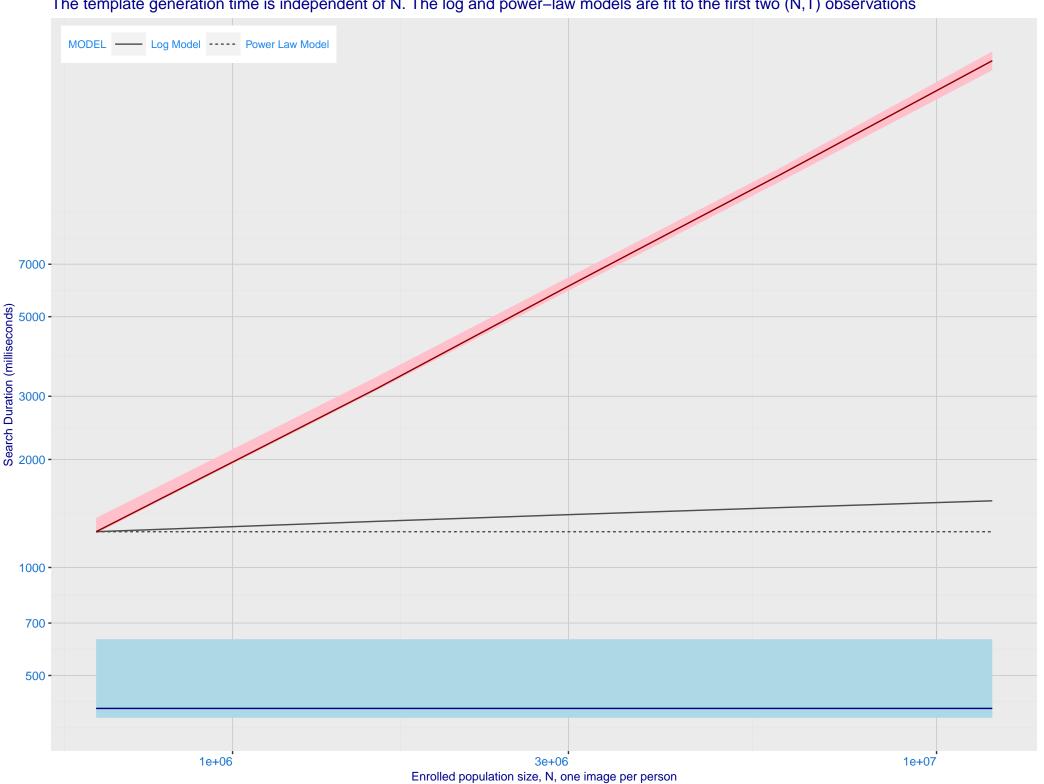




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -• 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 - 0.003 - 0.002 - 0.001 - 0.001 - 0.000 - 0.300 - 0.200 enrolment_style consolidated ---- random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

L: 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

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



