A: Datasheet

Algorithm: allgovision_001

Developer: AllGoVision

Submission Date: 2020_07_14

Template size: 2048 bytes

Template time (2.5 percentile): 772 msec

Template time (median): 778 msec

Template time (97.5 percentile): 851 msec

Investigation:

Frontal mugshot ranking 129 (out of 279) -- FNIR(1600000, 0, 1) = 0.0090 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 142 (out of 241) -- FNIR(1600000, 0, 1) = 0.0383 vs. lowest 0.0062 from sensetime_005

Mugshot profile ranking 81 (out of 210) -- FNIR(1600000, 0, 1) = 0.6609 vs. lowest 0.0587 from xforwardai_002

Immigration visa-border ranking 89 (out of 168) — FNIR(1600000, 0, 1) = 0.0206 vs. lowest 0.0013 from visionlabs_010

Immigration visa-kiosk ranking 104 (out of 165) -- FNIR(1600000, 0, 1) = 0.2411 vs. lowest 0.0568 from cloudwalk_hr_000

Identification:

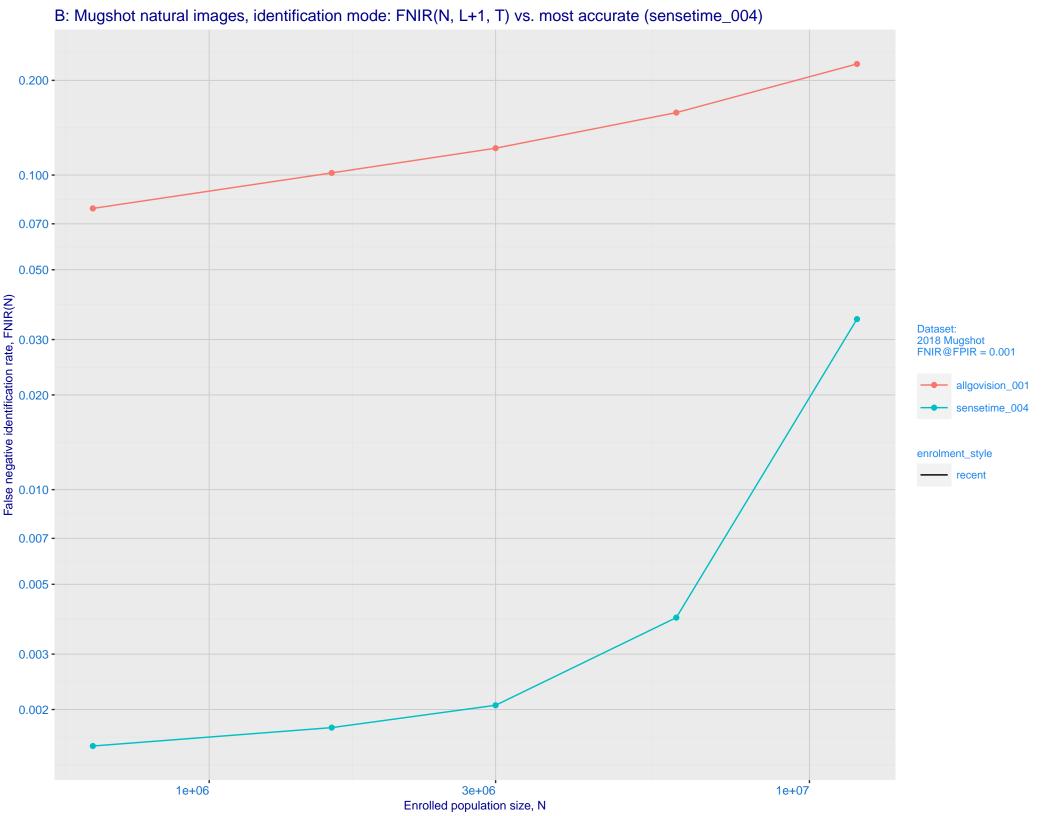
Frontal mugshot ranking 147 (out of 279) -- FNIR(1600000, T, L+1) = 0.1016, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

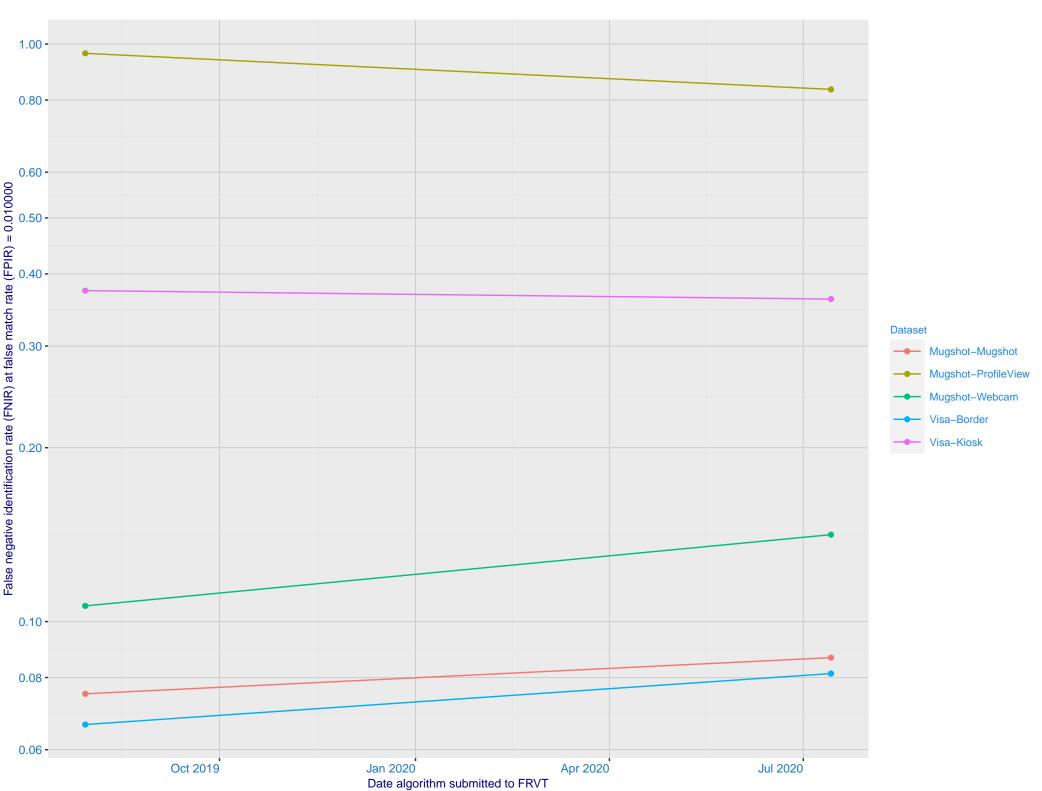
Mugshot webcam ranking 143 (out of 236) -- FNIR(1600000, T, L+1) = 0.2204, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 75 (out of 209) — FNIR(1600000, T, L+1) = 0.9857, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000

Immigration visa-border ranking 93 (out of 167) -- FNIR(1600000, T, L+1) = 0.1503, FPIR=0.001000 vs. lowest 0.0047 from idemia_008

Immigration visa-kiosk ranking 72 (out of 162) — FNIR(1600000, T, L+1) = 0.4926, FPIR=0.001000 vs. lowest 0.0996 from cloudwalk_hr_000

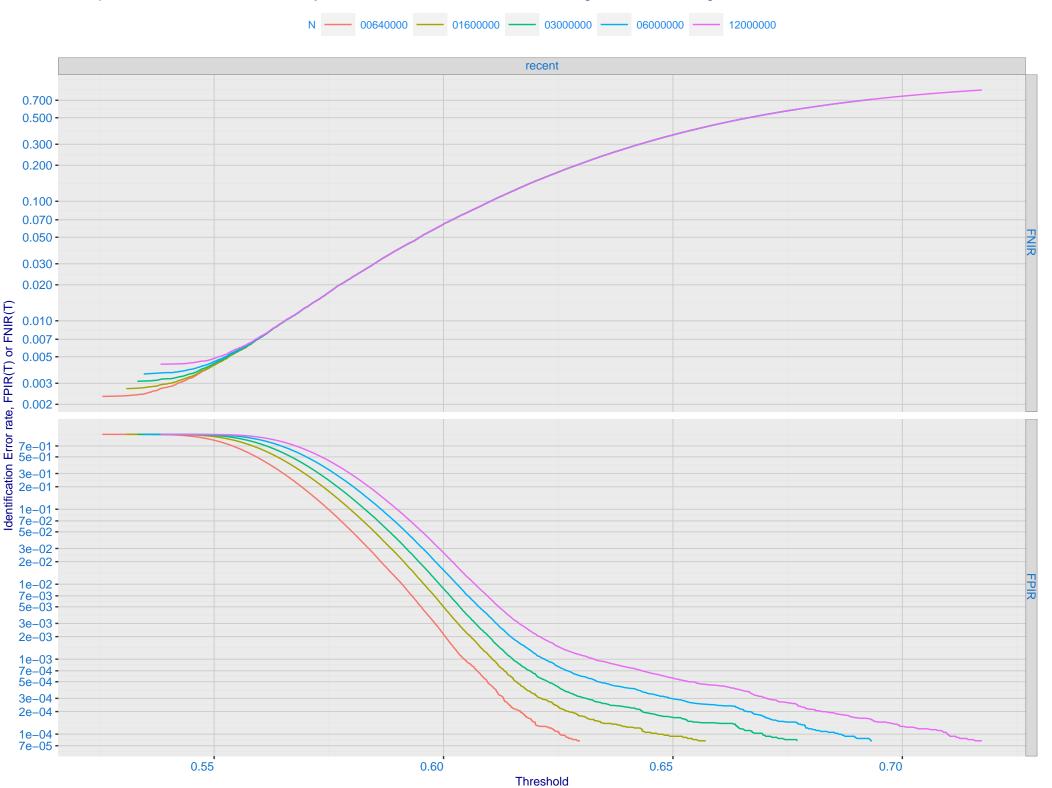




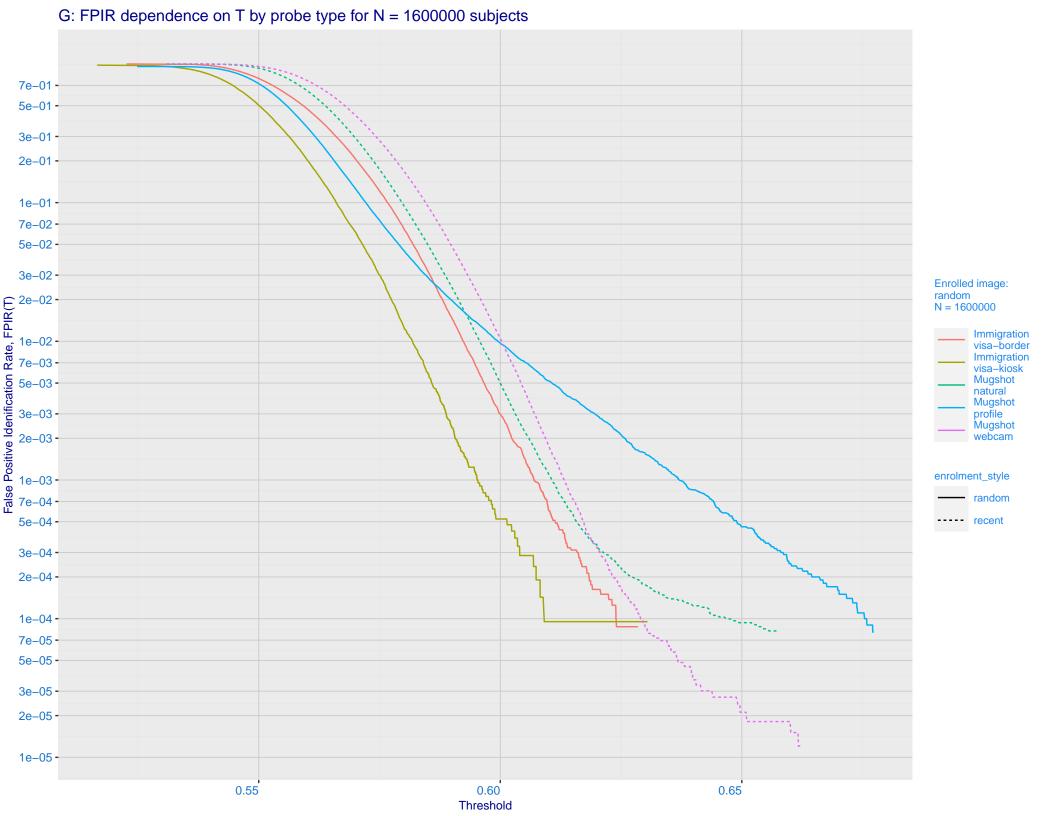
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 allgovision 001 0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.002 - 0.001 - 0.500 - 0.500 - 0.200 - 0. enrolment_style 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 -

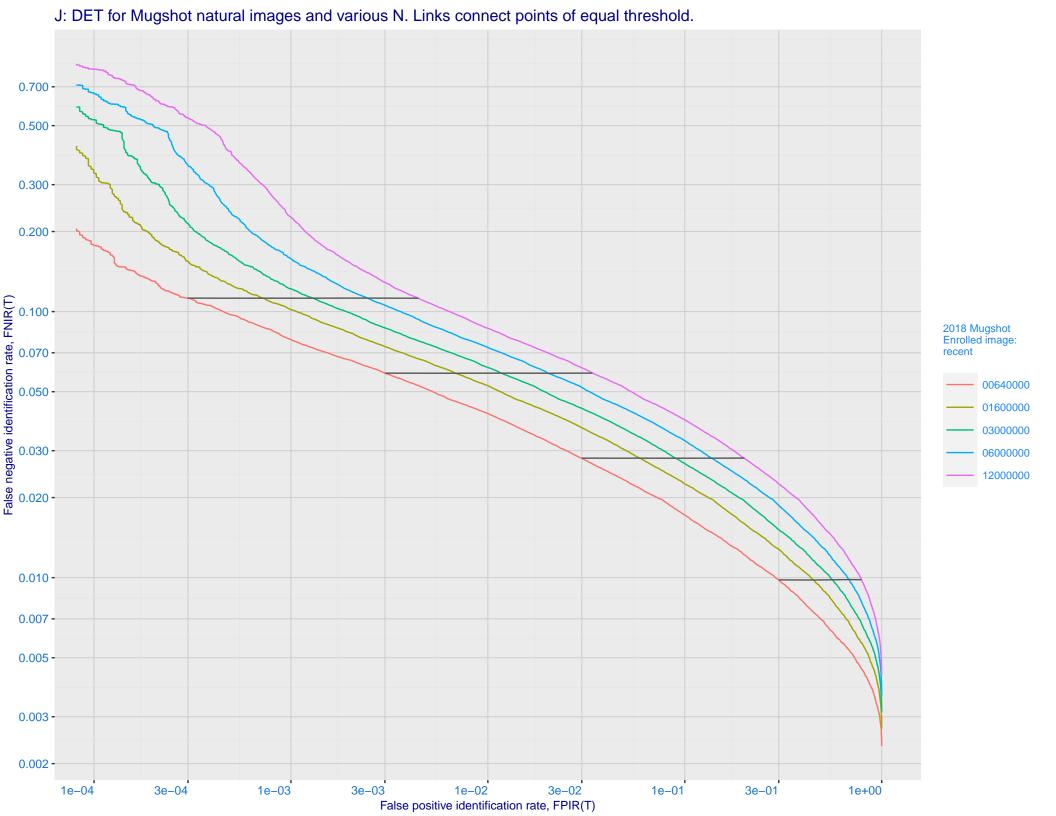
False positive identification rate, FPIR(T)

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

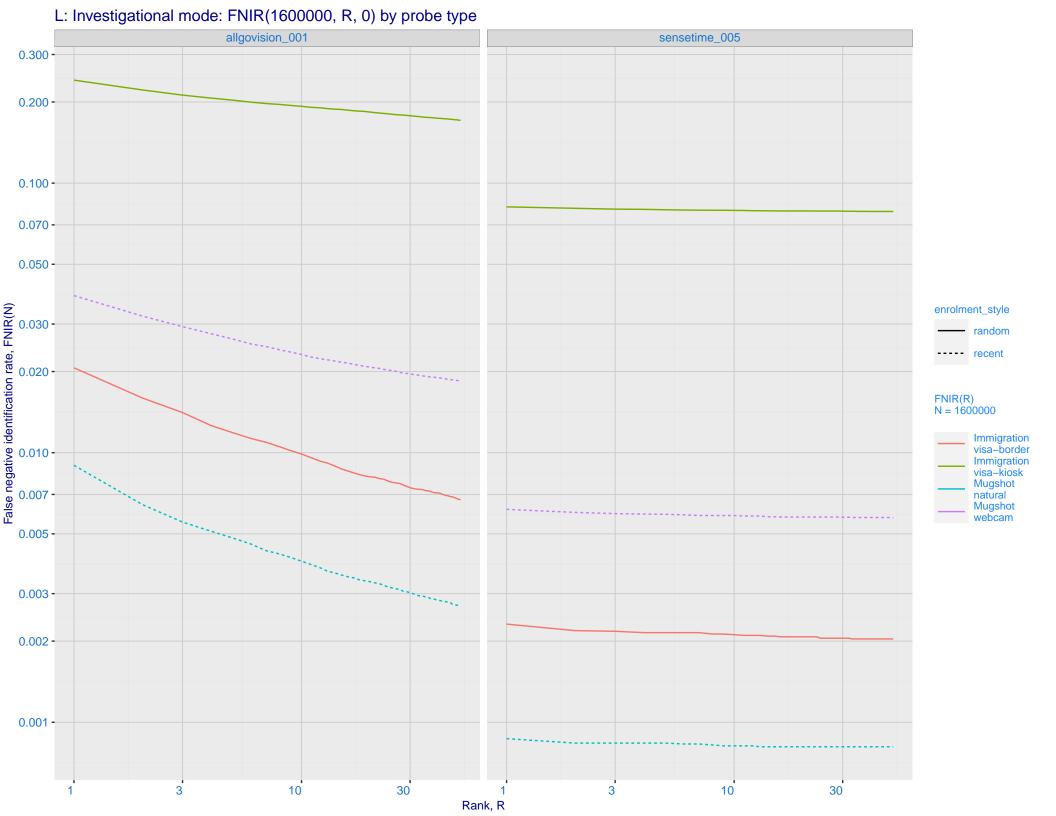


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 -5e-02 -3e-02 -3e-02 -1e-02 -**Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam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

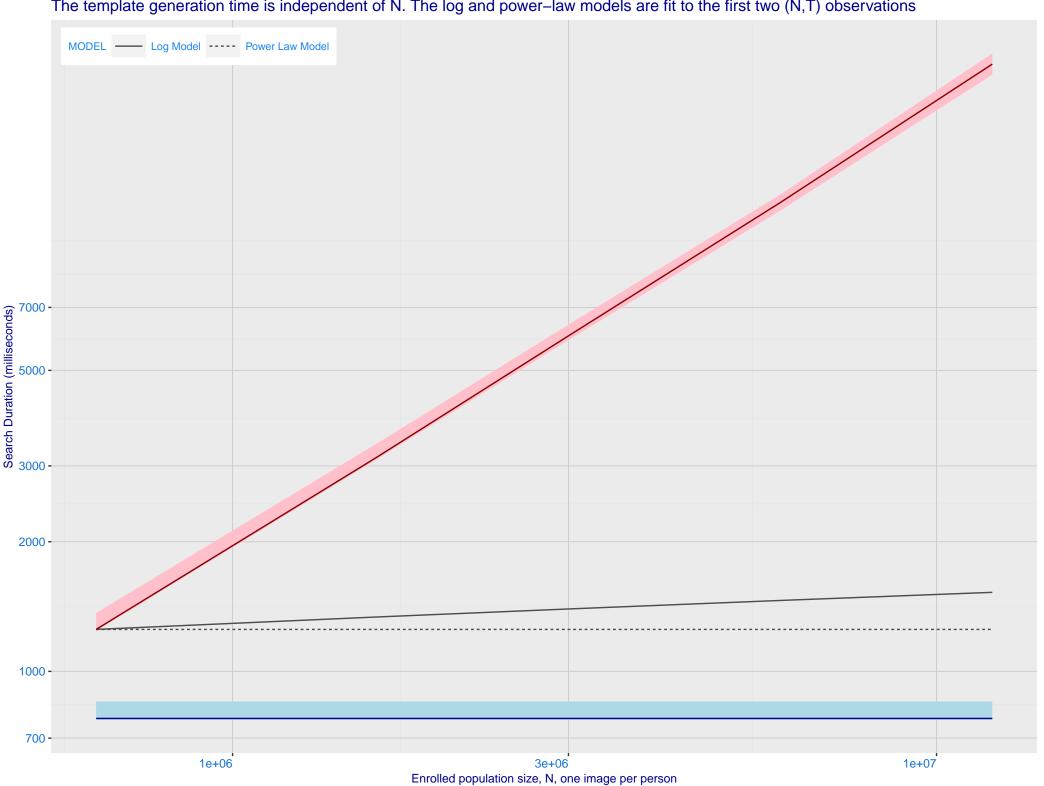




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Palse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.300 - 0.200 - 0.070 - 0. FNIR@Rank = 1 allgovision_001 sensetime_005 Mugshot webcam Mugshot natural enrolment_style random ---- recent 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



