A: Datasheet

Algorithm: glory_0

Developer: Glory Ltd

Submission Date: 2018_06_30

Template size: 418 bytes

Template time (2.5 percentile): 153 msec

Template time (median): 159 msec

Template time (97.5 percentile): 174 msec

Investigation:

Frontal mugshot ranking 233 (out of 265) -- FNIR(1600000, 0, 1) = 0.1781 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 203 (out of 227) -- FNIR(1600000, 0, 1) = 0.3201 vs. lowest 0.0062 from sensetime_005

Mugshot profile ranking 192 (out of 196) — FNIR(1600000, 0, 1) = 0.9936 vs. lowest 0.0591 from sensetime_005

Immigration visa-border ranking 118 (out of 148) -- FNIR(1600000, 0, 1) = 0.2275 vs. lowest 0.0013 from visionlabs_010

Immigration visa-kiosk ranking 129 (out of 145) — FNIR(1600000, 0, 1) = 0.6777 vs. lowest 0.0568 from hr_000

Identification:

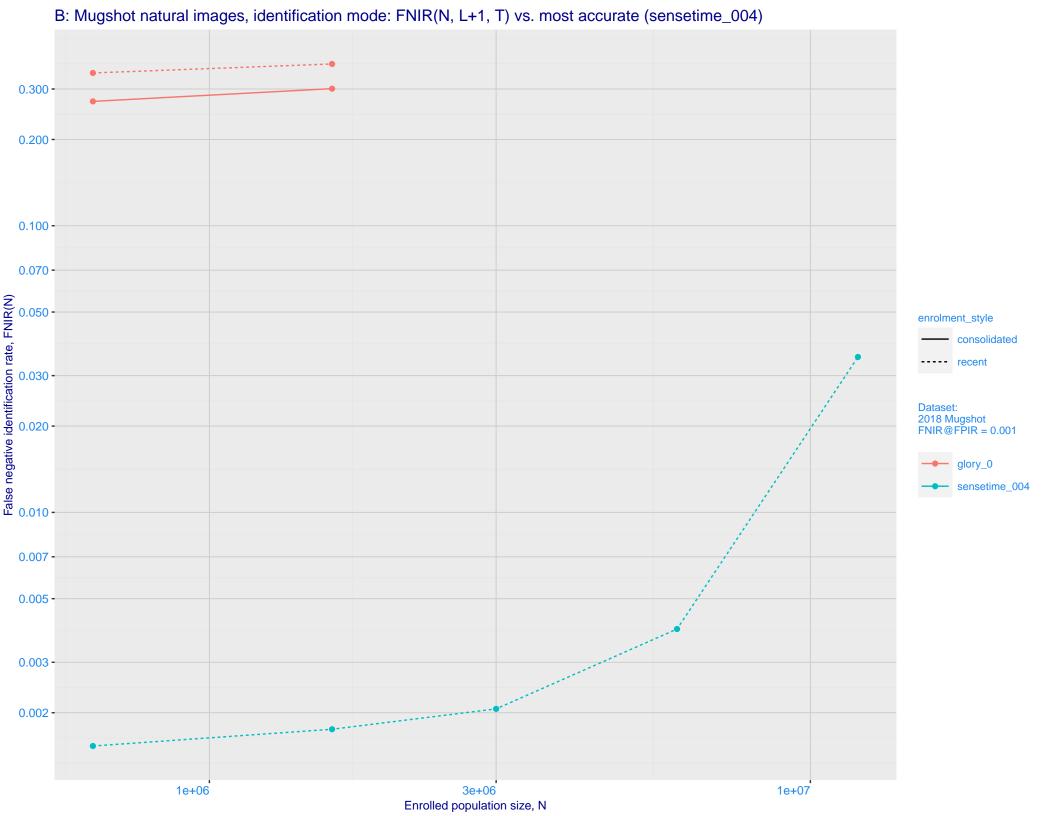
Frontal mugshot ranking 204 (out of 265) -- FNIR(1600000, T, L+1) = 0.3668, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

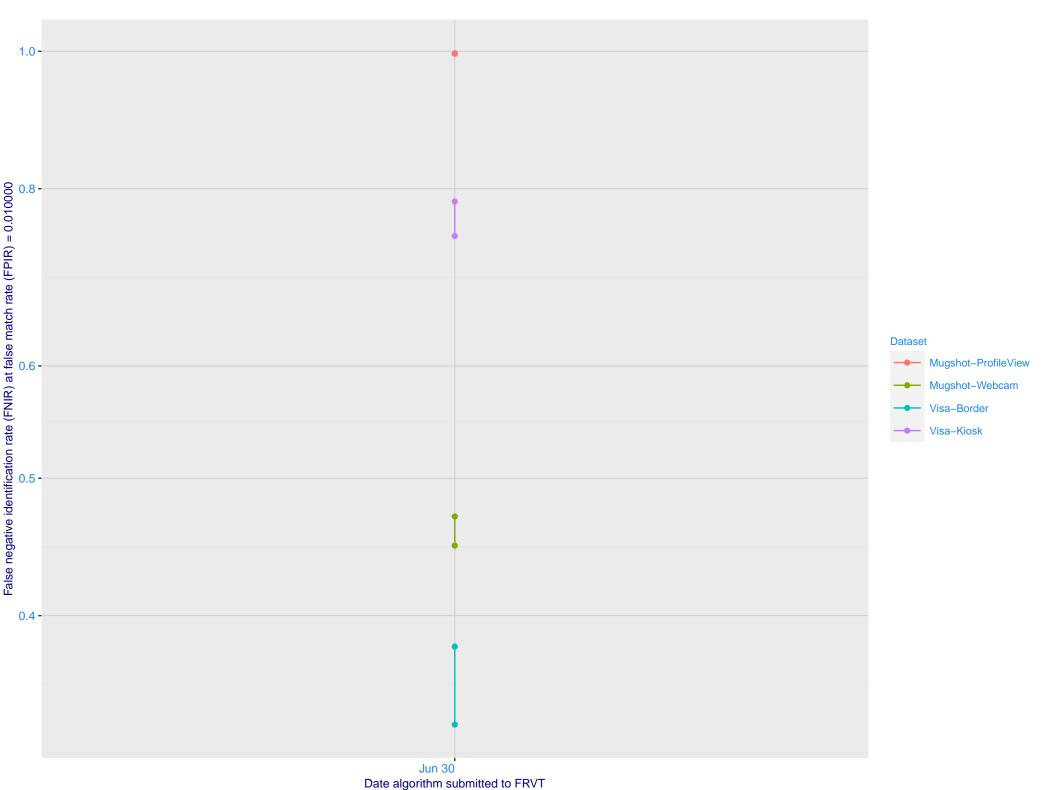
Mugshot webcam ranking 186 (out of 225) -- FNIR(1600000, T, L+1) = 0.5475, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 97 (out of 195) -- FNIR(1600000, T, L+1) = 0.9946, FPIR=0.001000 vs. lowest 0.1331 from hr_000

Immigration visa-border ranking 103 (out of 146) -- FNIR(1600000, T, L+1) = 0.4530, FPIR=0.001000 vs. lowest 0.0049 from hr_000

Immigration visa-kiosk ranking 93 (out of 141) -- FNIR(1600000, T, L+1) = 0.8389, FPIR=0.001000 vs. lowest 0.0996 from hr_000

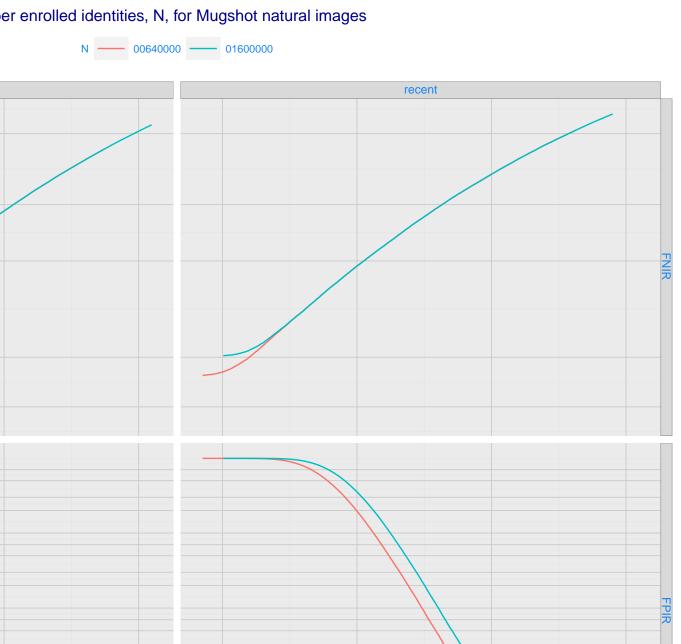


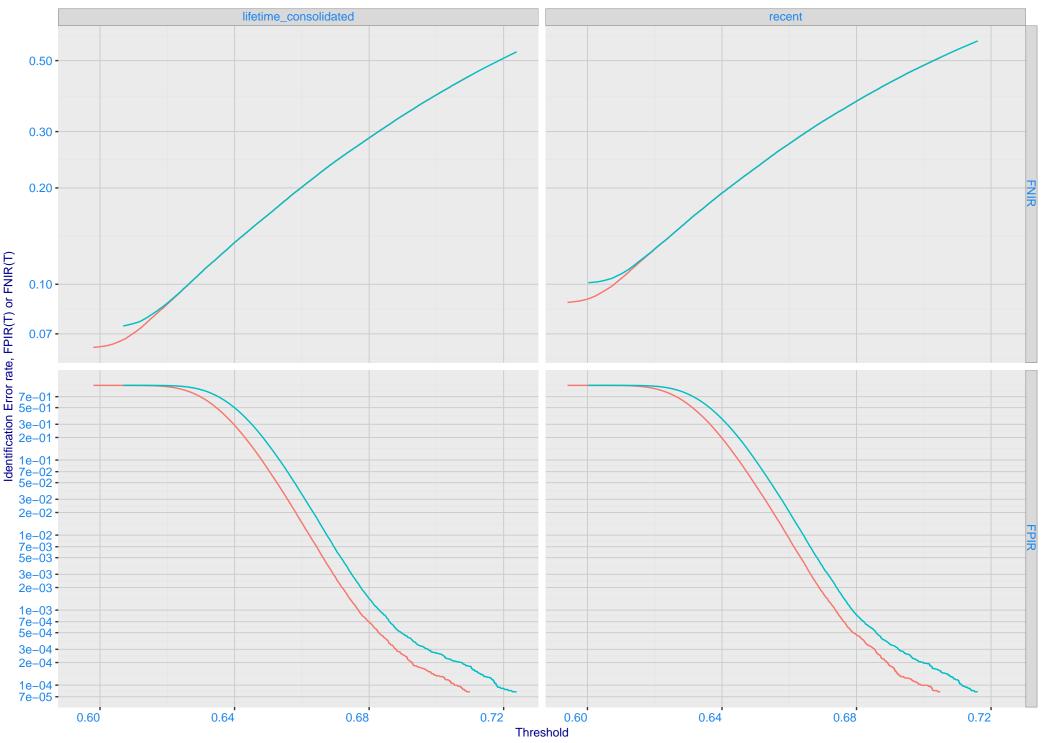


D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.000 - 0.000 - 0.500 - 0.200 - 0. enrolment_style consolidated-ONE-MATE random-ONE-MATE recent-ONE-MATE 0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -

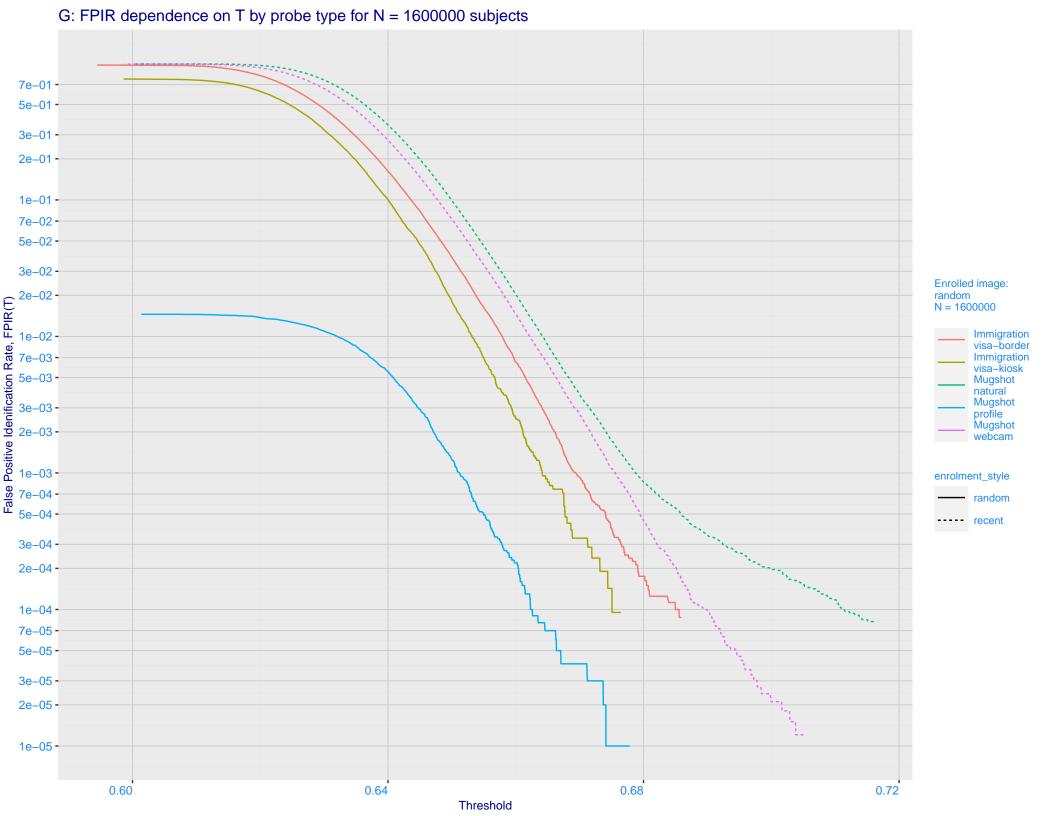
False positive identification rate, FPIR(T)

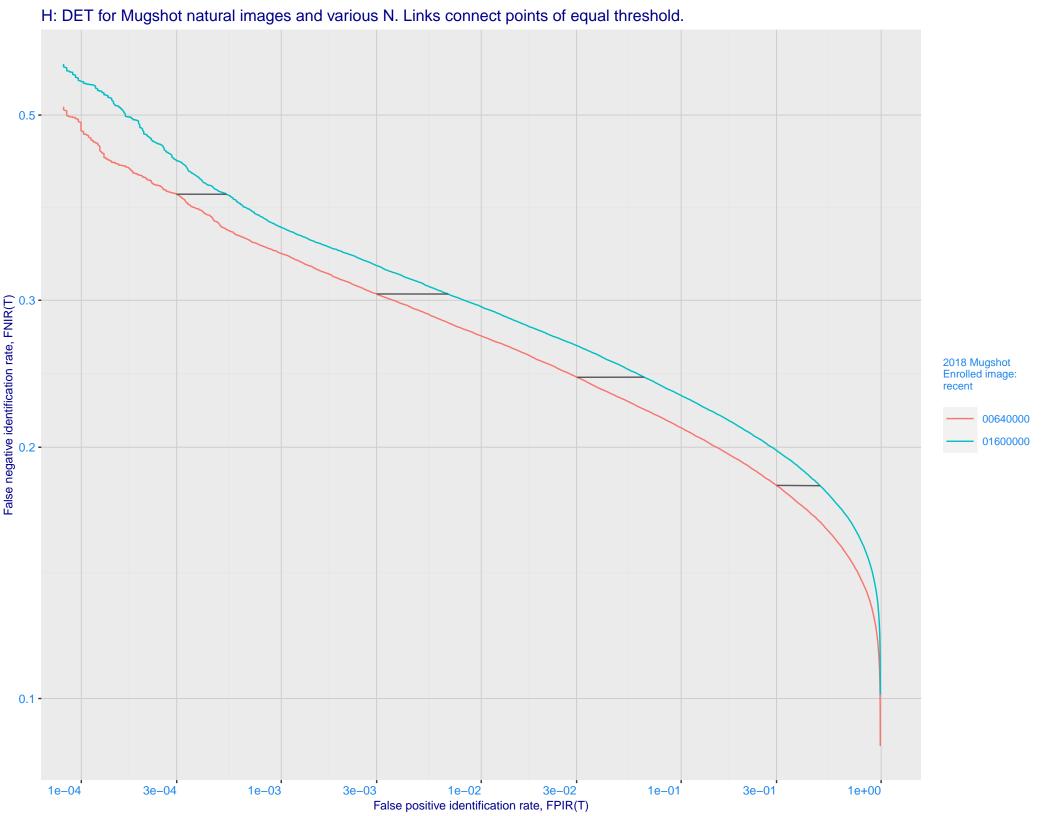
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images





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 -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)

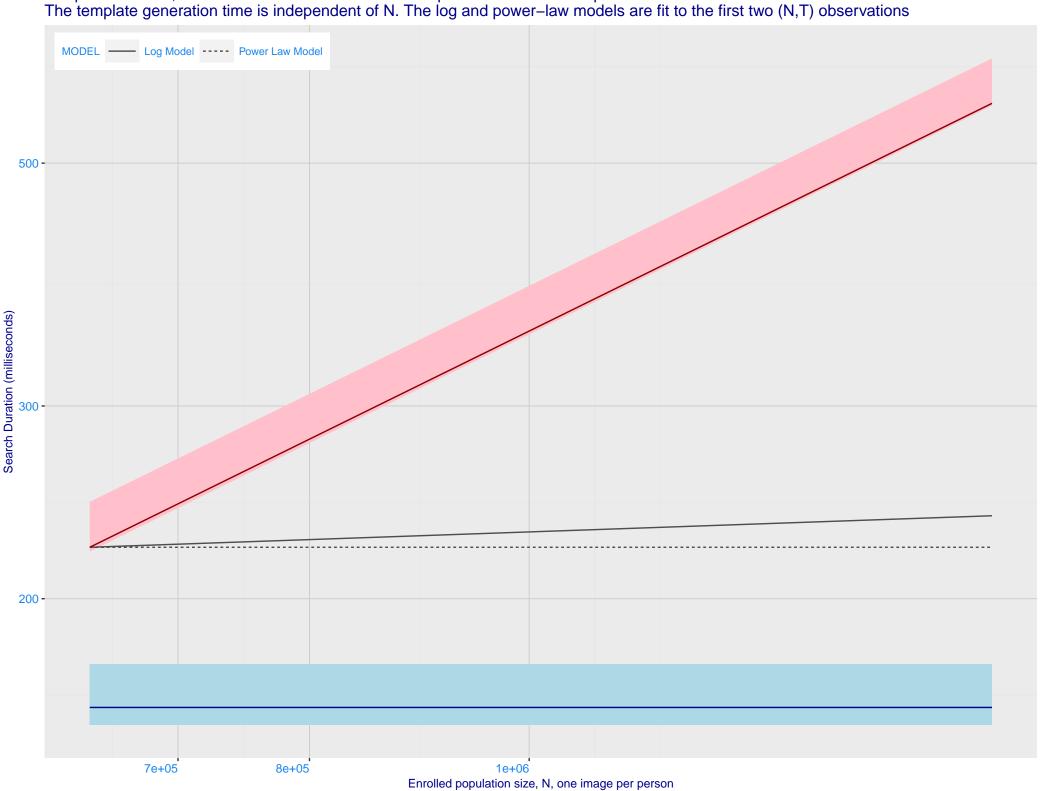




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Ealse negative identification rate, FNIR(N) 0.003 - 0.001 - 0.001 - 0.500 - 0.500 - 0.200 - 0. enrolment_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 glory_0 - 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 glory_0 sensetime_005 0.700 -0.500 -0.300 -0.200 -0.100 enrolment_style Ealse negative identification rate, FNIR(N) 0.000 - 0.000 - 0.000 - 0.010 - 0. lifetime_consolidated ---- random --- recent FNIR(R) N = 1600000 Immigration visa-border Immigration visa-kiosk Mugshot natural Mugshot webcam 0.007 -0.005 -0.003 -0.002 -0.001 -10 30 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



