A: Datasheet

Algorithm: everai_0

Developer: Paravision (EverAI)

Submission Date: 2018_06_21

Template size: 2048 bytes

Template time (2.5 percentile): 430 msec

Template time (median): 431 msec

Template time (97.5 percentile): 459 msec

Investigation:

Frontal mugshot ranking 155 (out of 259) -- FNIR(1600000, 0, 1) = 0.0188 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 121 (out of 221) -- FNIR(1600000, 0, 1) = 0.0379 vs. lowest 0.0062 from sensetime_005

Mugshot profile ranking 49 (out of 190) -- FNIR(1600000, 0, 1) = 0.5341 vs. lowest 0.0591 from sensetime_005

Immigration visa-border ranking 122 (out of 142) -- FNIR(1600000, 0, 1) = 0.4229 vs. lowest 0.0014 from visionlabs_009

Immigration visa-kiosk ranking 118 (out of 139) -- FNIR(1600000, 0, 1) = 0.5291 vs. lowest 0.0694 from cib_000

Identification:

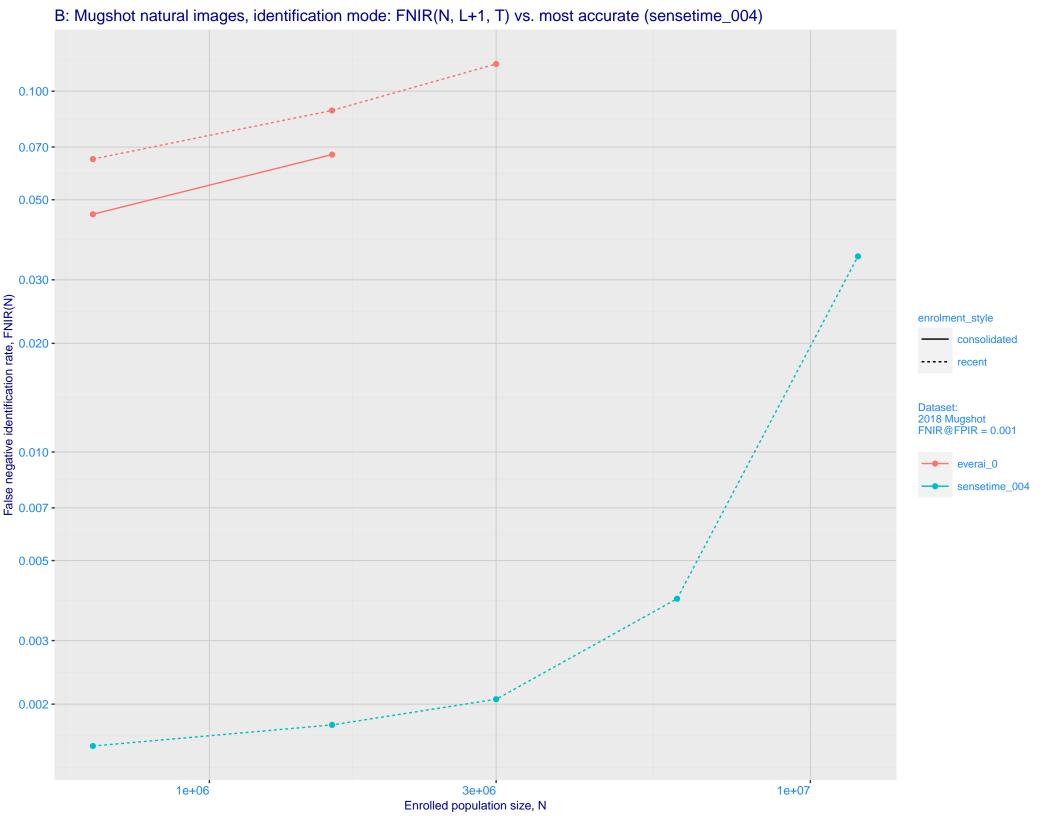
Frontal mugshot ranking 122 (out of 259) -- FNIR(1600000, T, L+1) = 0.0884, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 114 (out of 219) -- FNIR(1600000, T, L+1) = 0.1696, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 131 (out of 189) -- FNIR(1600000, T, L+1) = 0.9992, FPIR=0.001000 vs. lowest 0.1733 from sensetime_005

Immigration visa-border ranking 98 (out of 139) -- FNIR(1600000, T, L+1) = 0.4699, FPIR=0.001000 vs. lowest 0.0059 from sensetime_004

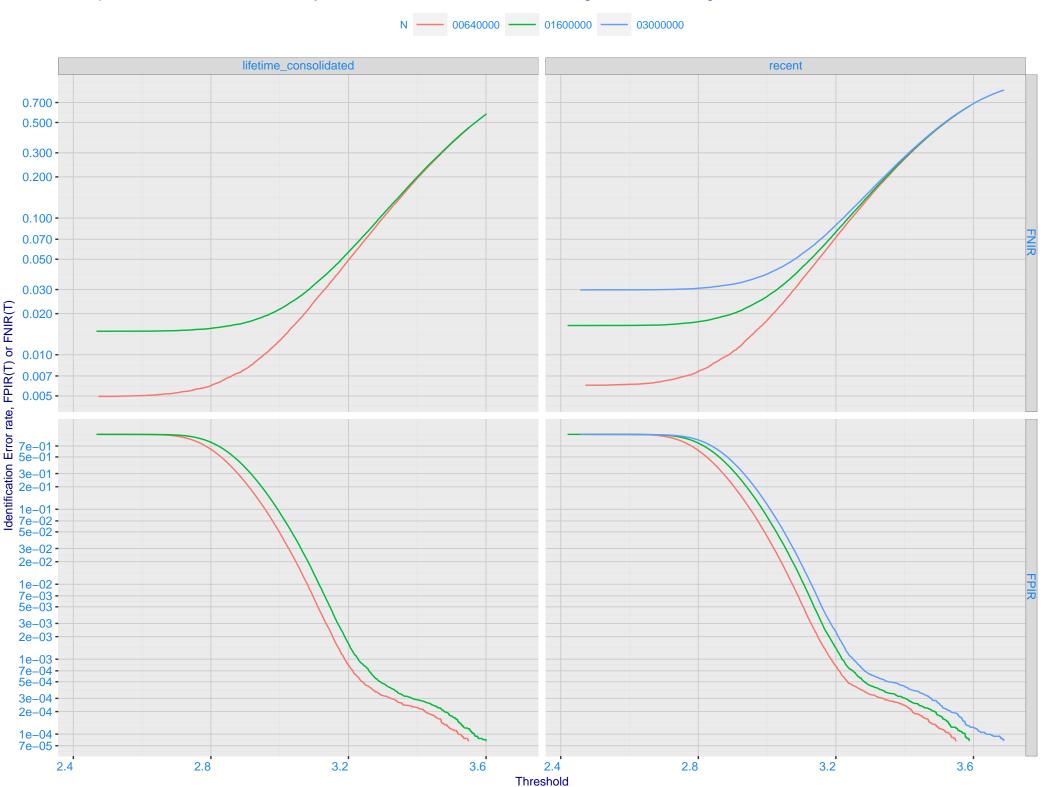
Immigration visa-kiosk ranking 102 (out of 134) -- FNIR(1600000, T, L+1) = 0.9265, FPIR=0.001000 vs. lowest 0.1048 from sensetime_005



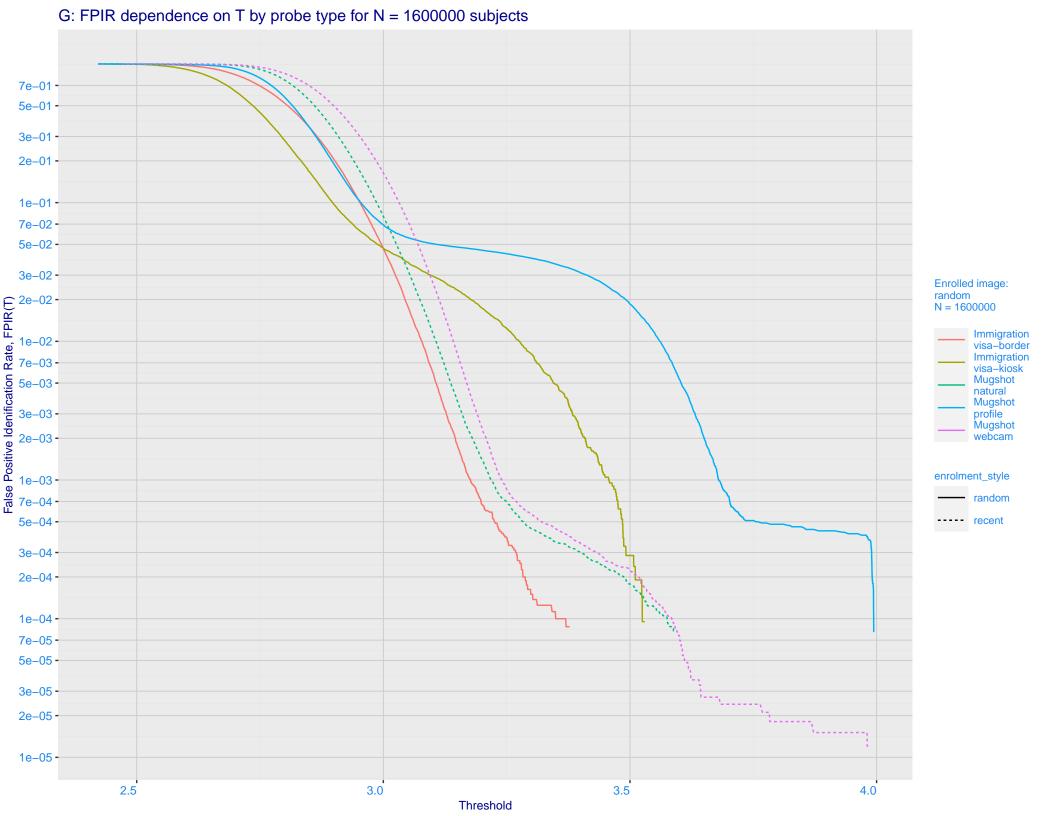
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment_style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

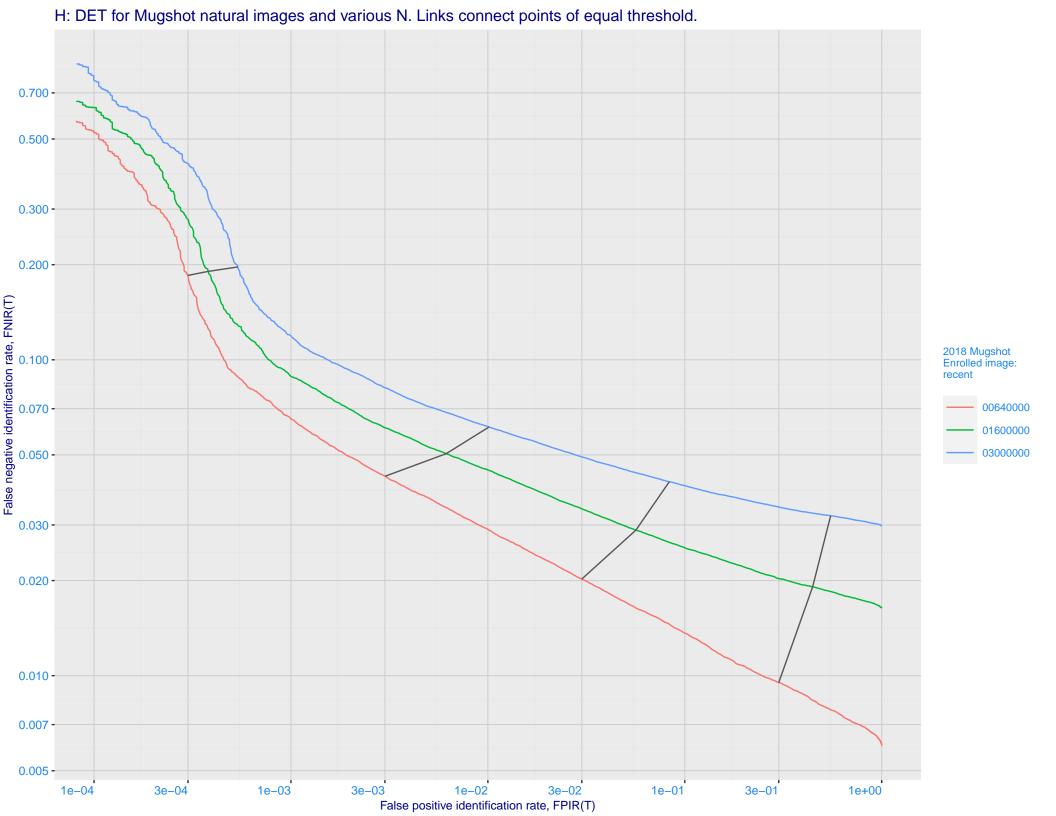
False positive identification rate, FPIR(T)

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

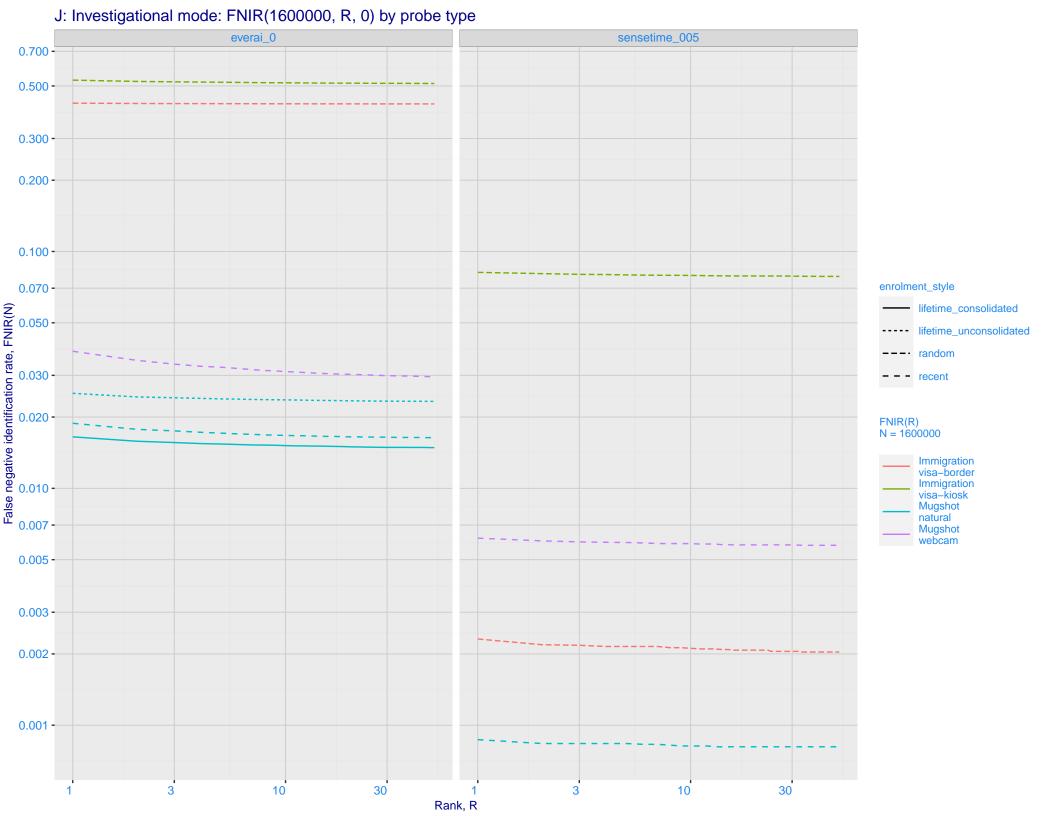


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 -5e-02 -3e-02 -3e-02 -1e-02 -**Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam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

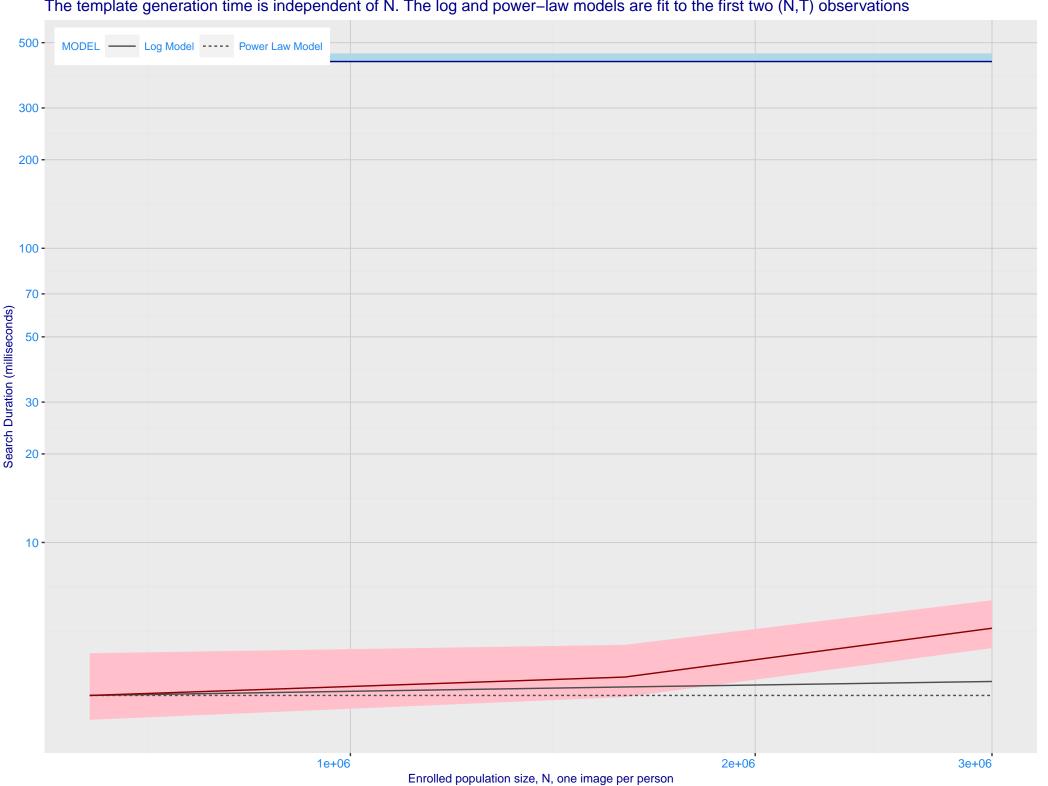




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Ealse negative identification rate, FNIR(N) 0.003 - 0.001 - 0.700 - 0.500 - 0.200 - 0. FNIR@Rank = 1 everai_0 sensetime_005 Mugshot Mugshot webcam enrolment_style natural consolidated ---- random --- recent - - unconsolidated 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



