A: Datasheet

Algorithm: vd_0

Developer: Visidon

Submission Date: 2018_06_20

Template size: 1028 bytes

Template time (2.5 percentile): 320 msec

Template time (median): 337 msec

Template time (97.5 percentile): 366 msec

Investigation:

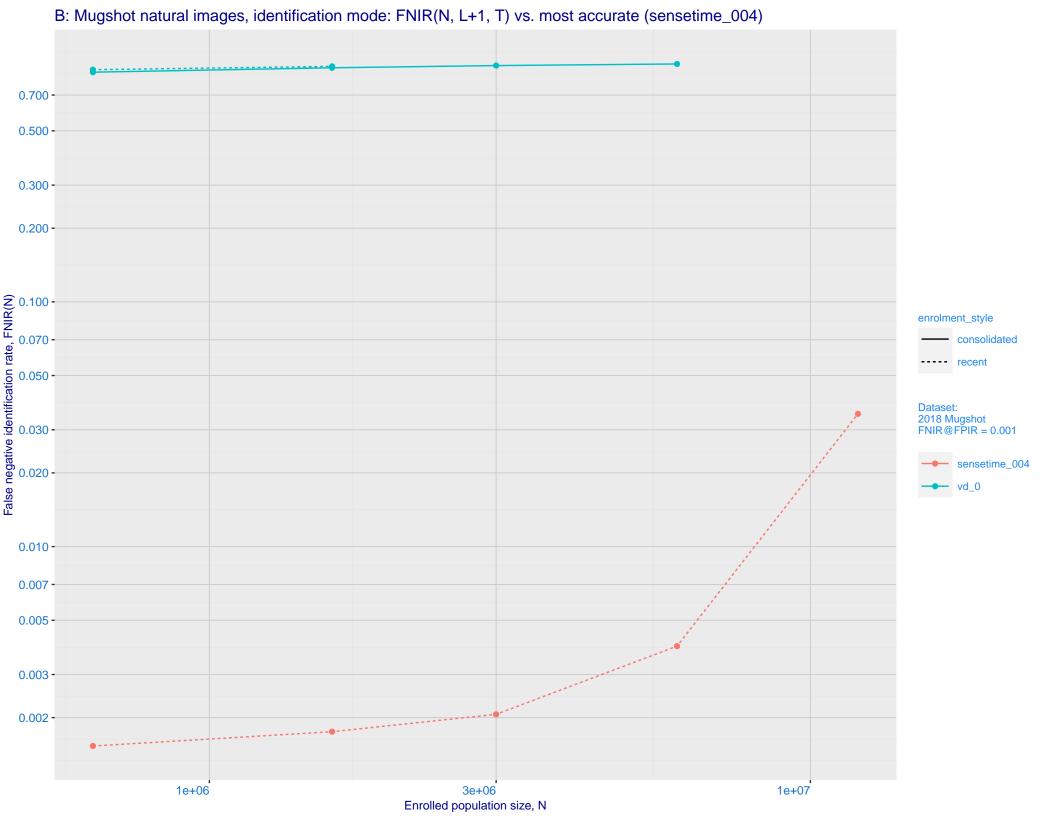
Frontal mugshot ranking 270 (out of 279) -- FNIR(1600000, 0, 1) = 0.4737 vs. lowest 0.0009 from sensetime_005

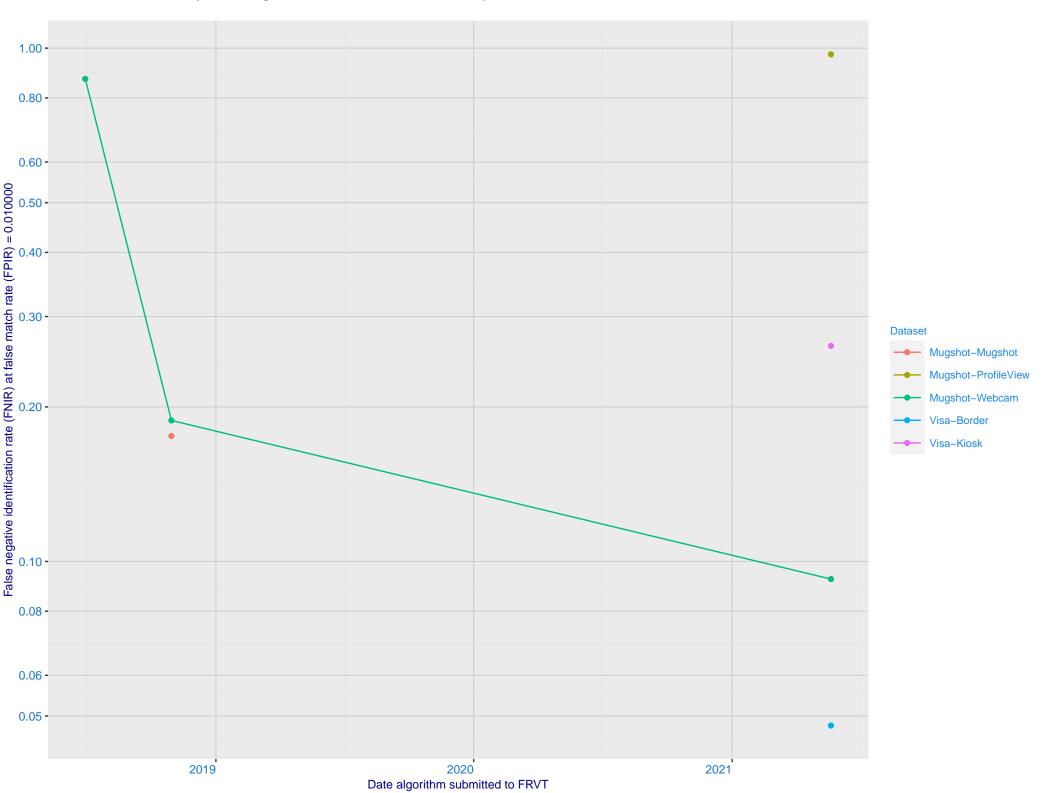
Mugshot webcam ranking 229 (out of 241) -- FNIR(1600000, 0, 1) = 0.5514 vs. lowest 0.0062 from sensetime_005

Identification:

Frontal mugshot ranking 262 (out of 279) -- FNIR(1600000, T, L+1) = 0.9168, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 225 (out of 236) -- FNIR(1600000, T, L+1) = 0.9459, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

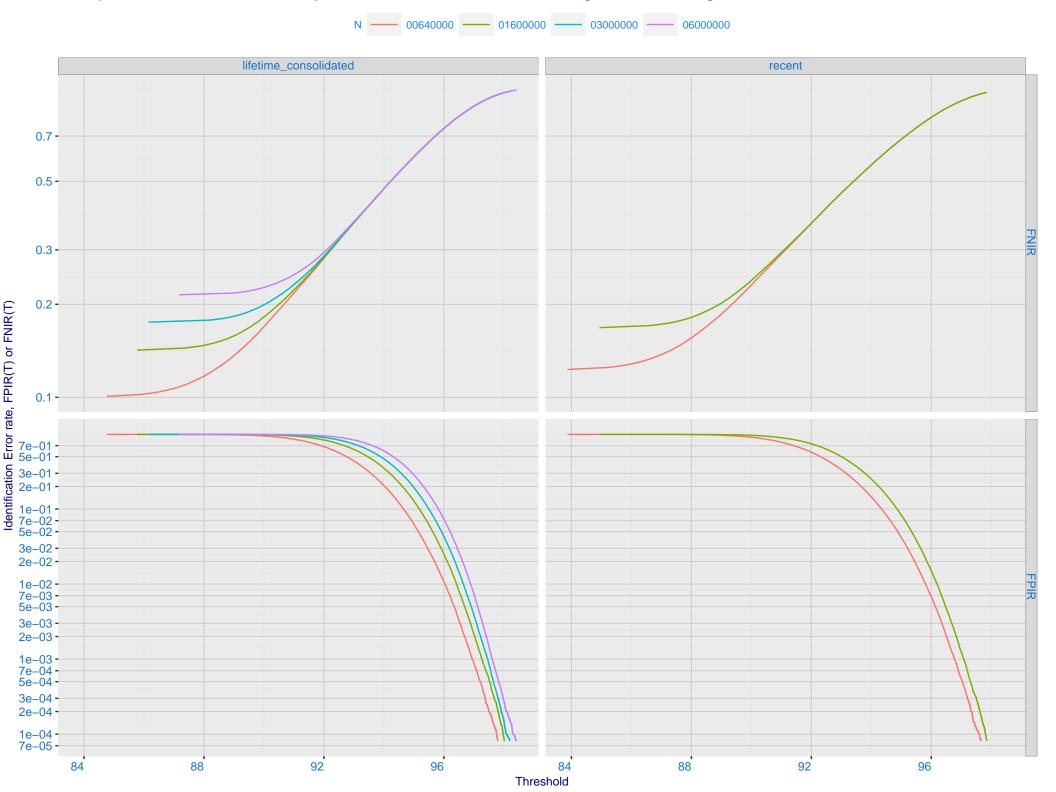




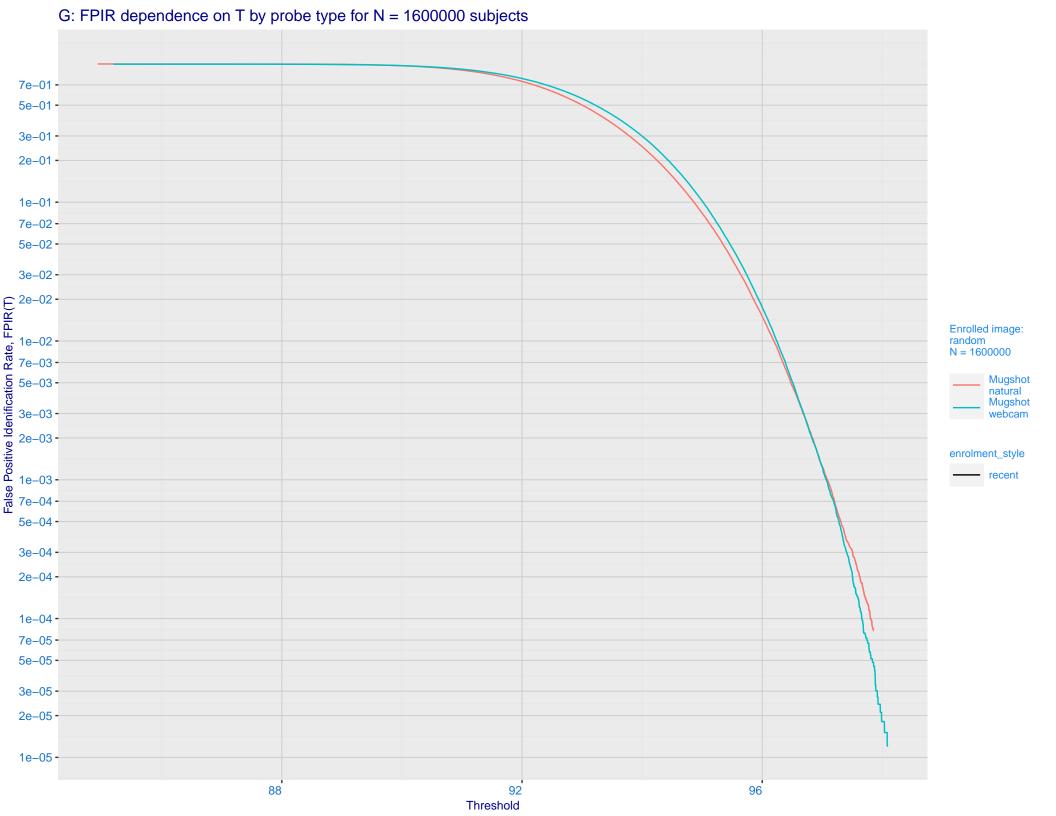
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment_style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

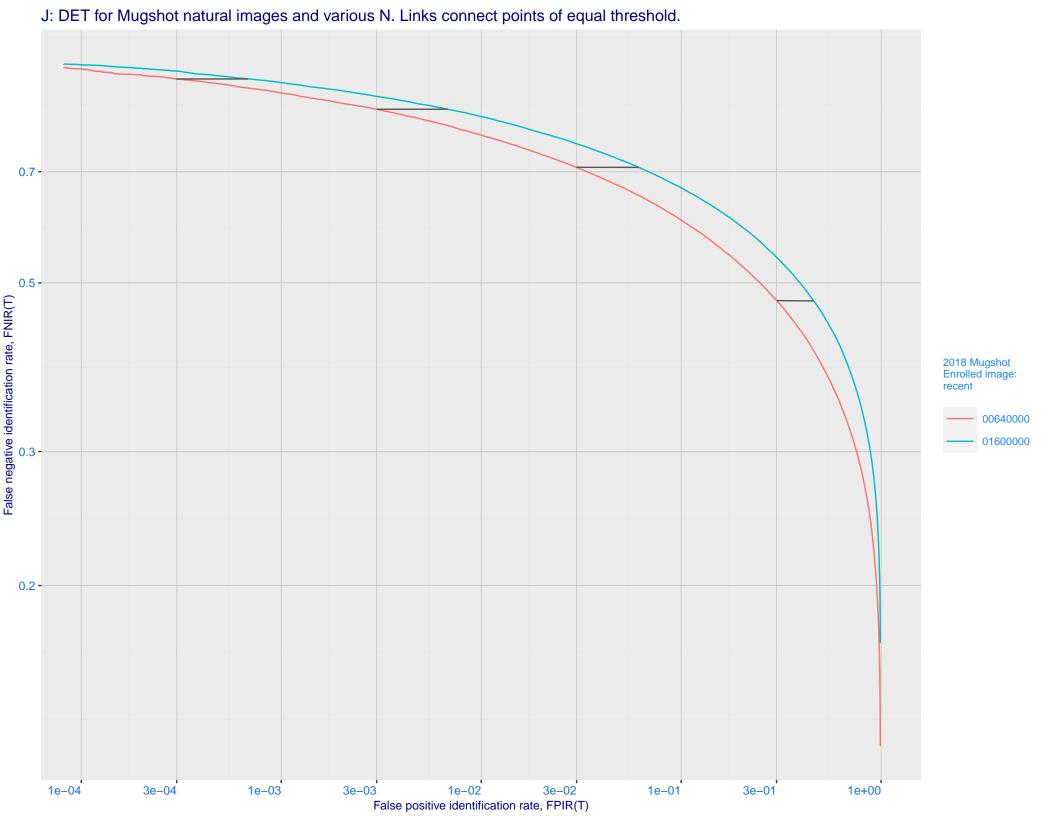
1e-03e-04e-03e-03e-03e-02e-01e-01e-01e-03e-04e-03e-04e-03e-04e-03e-01e+00e-03e-01e+00e-03e-01e+00e-03e-01e-03e-01e-03e-01e+00

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

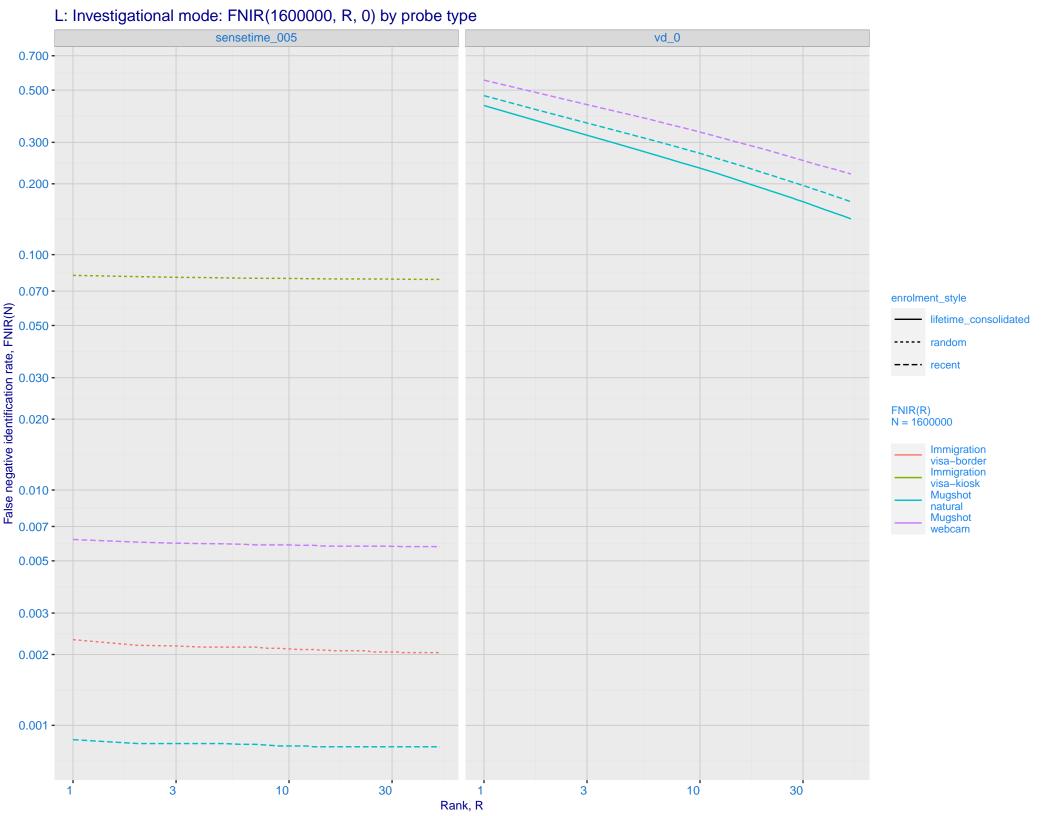


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 -5e-02 -3e-02 -3e-02 -1e-02 -**Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam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

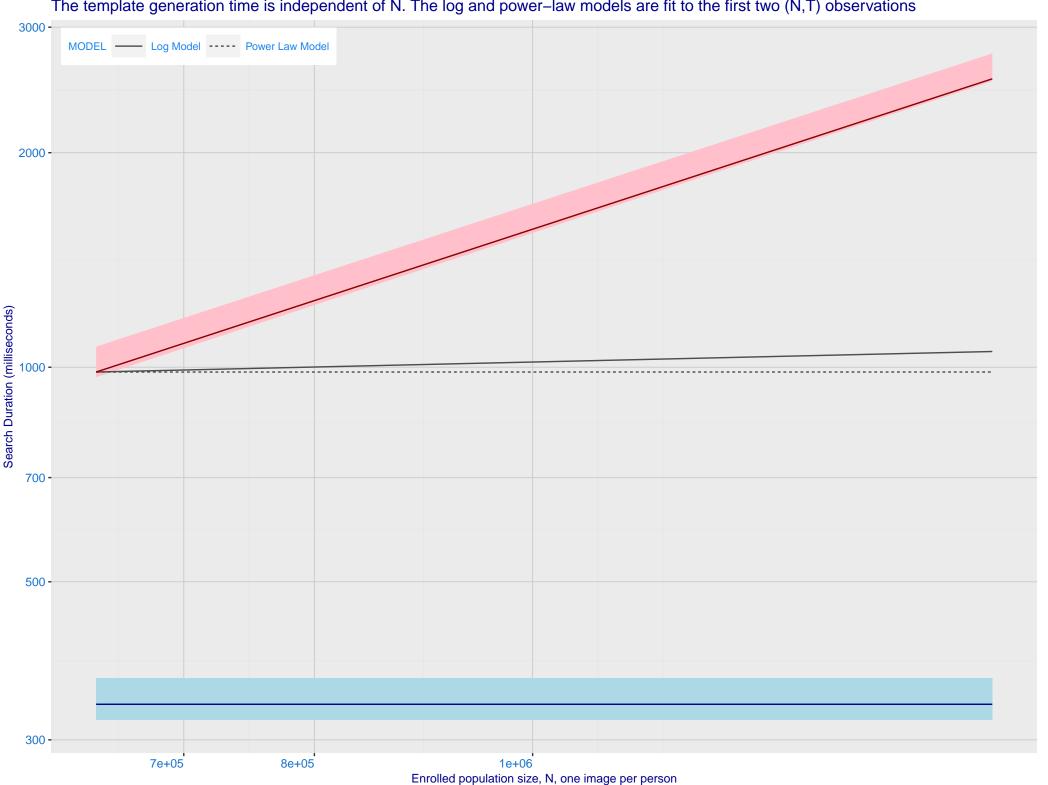




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Ealse negative identification rate, FNIR(N) 0.003 - 0.001 - 0.700 - 0.500 - 0.200 - 0. enrolment_style consolidated ---- random --- recent Mugshot webcam Mugshot natural FNIR@Rank = 1 sensetime_005 • vd_0 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



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



