A: Datasheet

Algorithm: vigilantsolutions_3

Developer: Vigilant Solutions

Submission Date: 2018_06_21

Template size: 1544 bytes

Template time (2.5 percentile): 794 msec

Template time (median): 825 msec

Template time (97.5 percentile): 885 msec

Investigation:

Frontal mugshot ranking 225 (out of 279) -- FNIR(1600000, 0, 1) = 0.0694 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 200 (out of 241) -- FNIR(1600000, 0, 1) = 0.1513 vs. lowest 0.0062 from sensetime_005

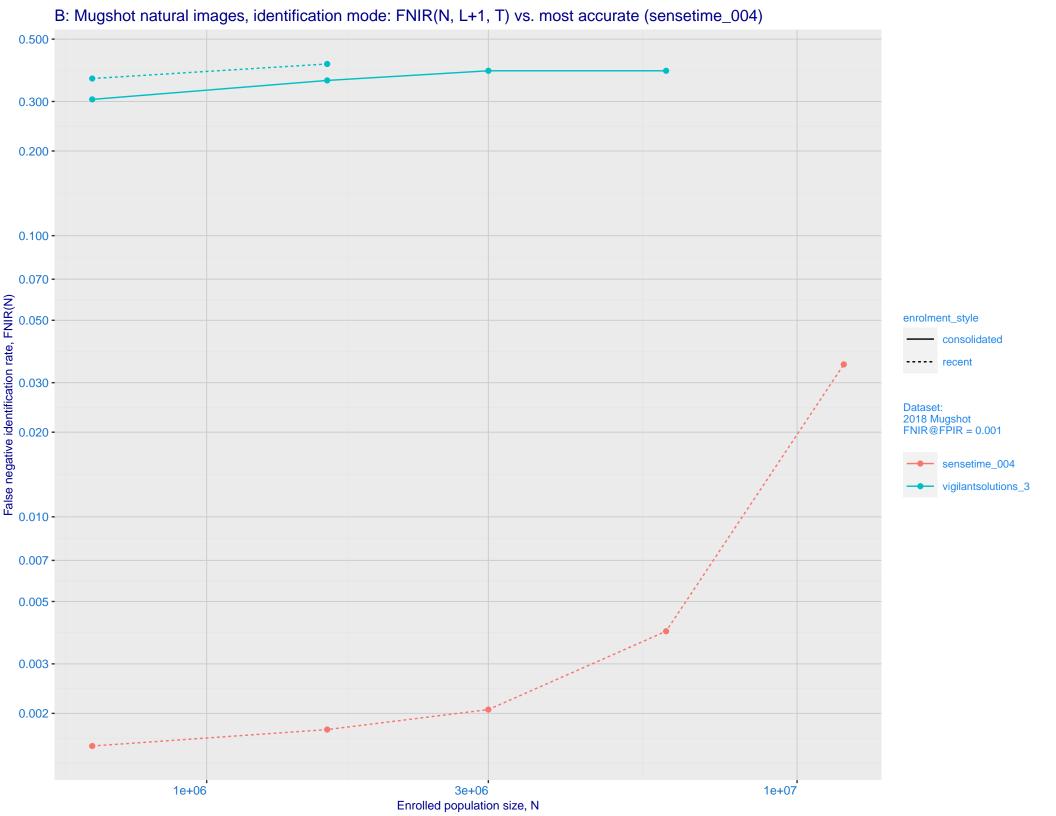
Mugshot profile ranking 165 (out of 210) -- FNIR(1600000, 0, 1) = 0.9579 vs. lowest 0.0587 from xforwardai_002

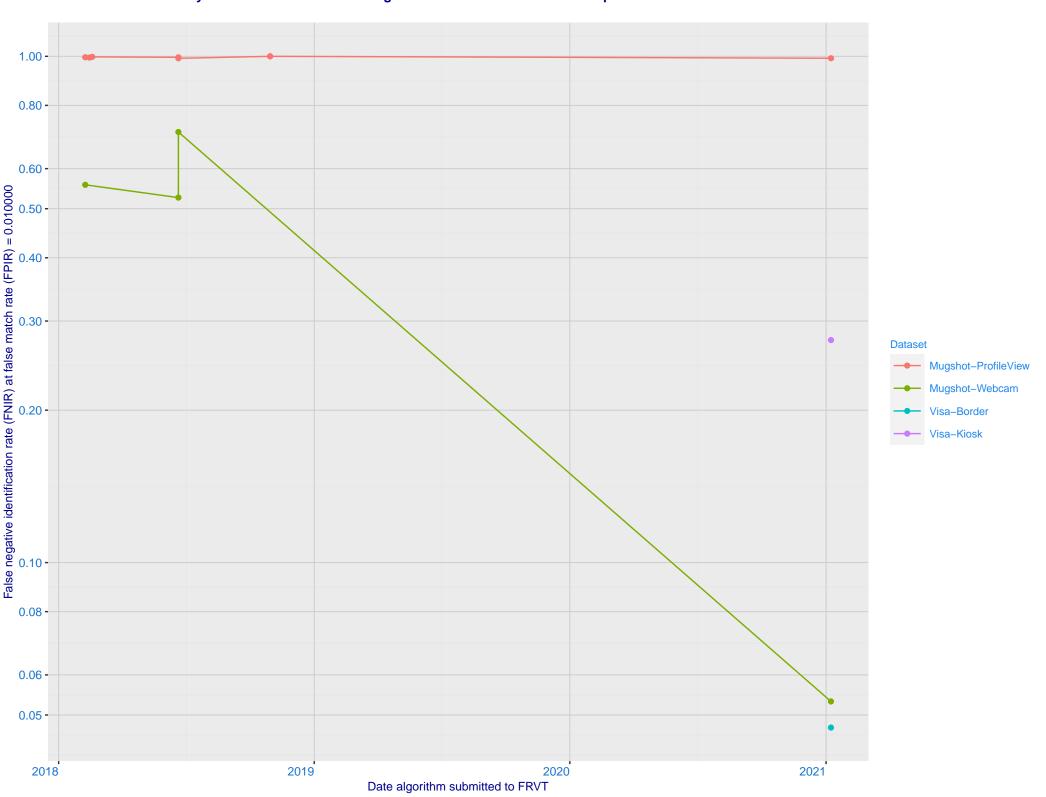
Identification:

Frontal mugshot ranking 224 (out of 279) -- FNIR(1600000, T, L+1) = 0.4079, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 207 (out of 236) -- FNIR(1600000, T, L+1) = 0.6605, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 134 (out of 209) -- FNIR(1600000, T, L+1) = 0.9987, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000

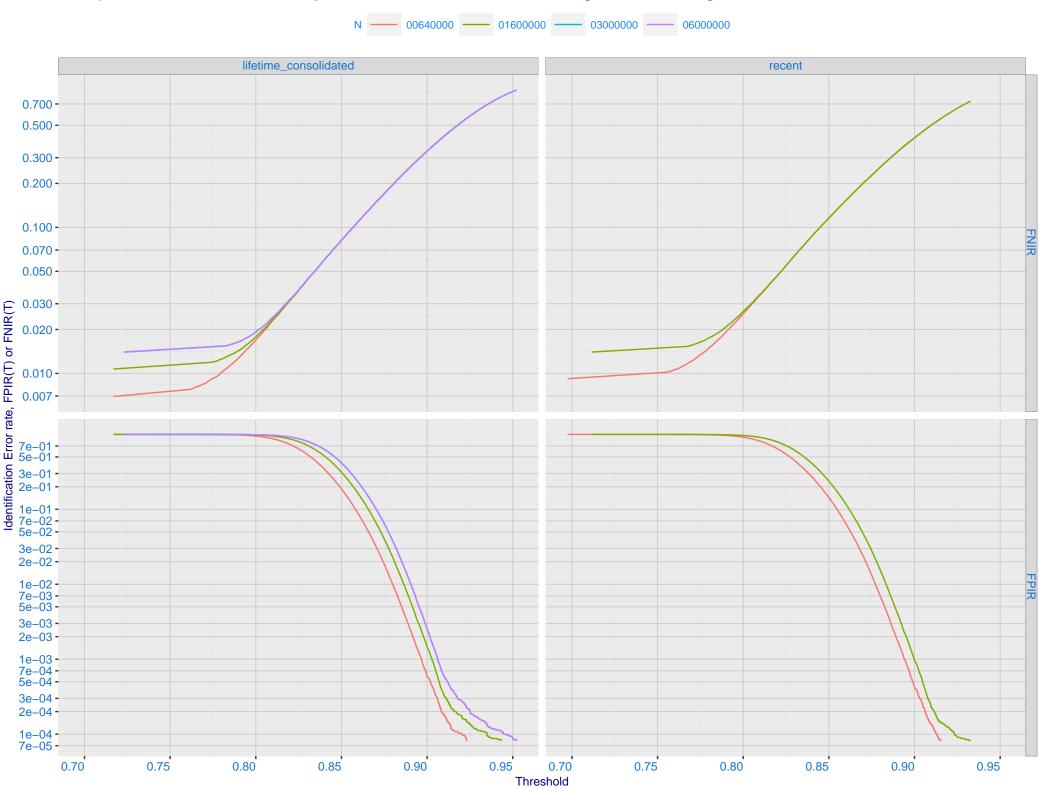




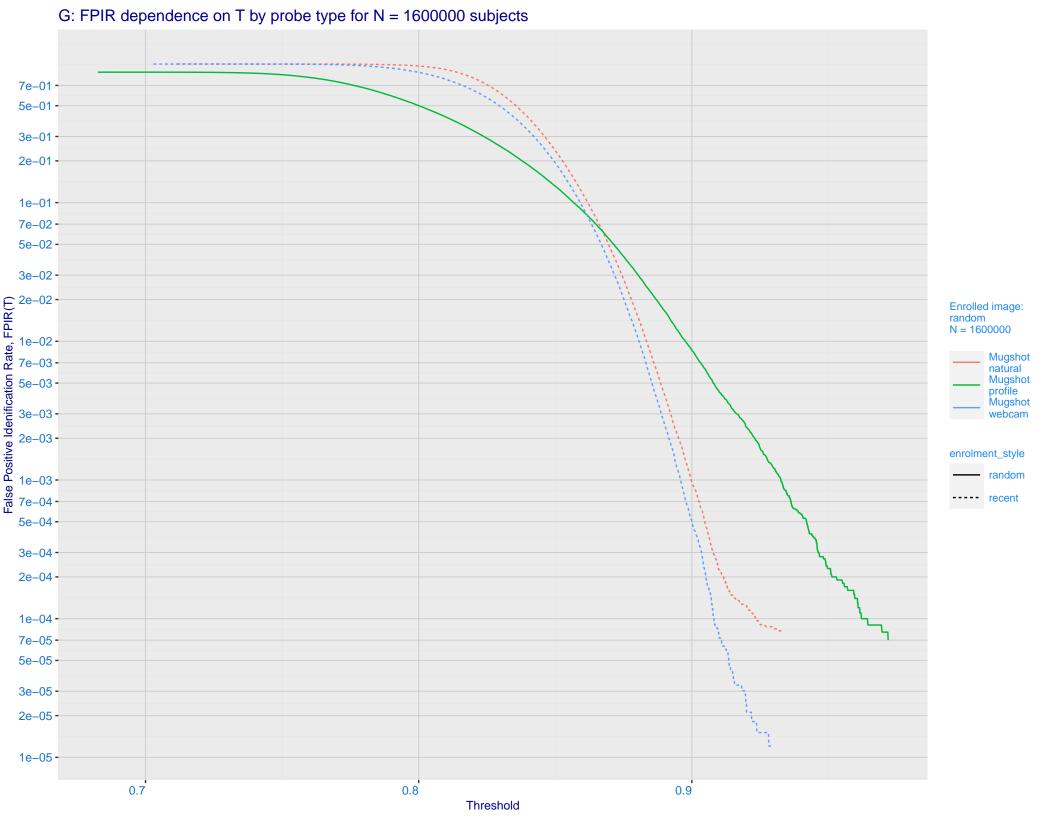
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.000 - 0.000 - 0.500 - 0.200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

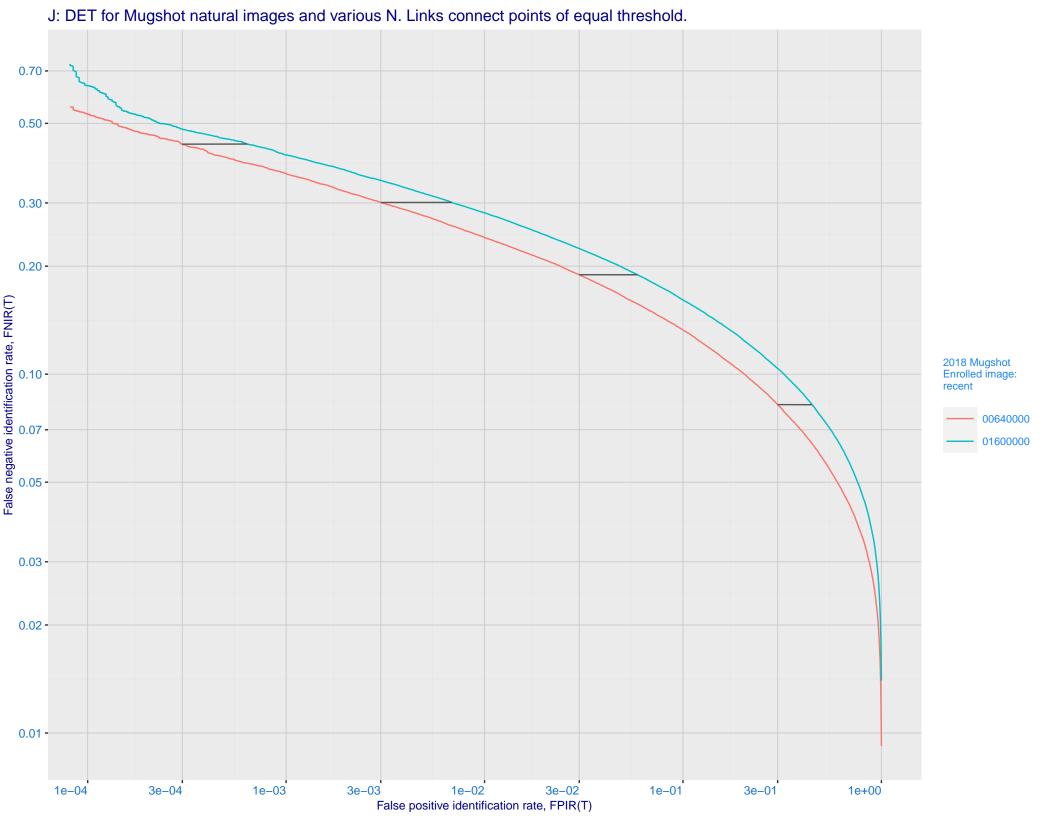
False positive identification rate, FPIR(T)

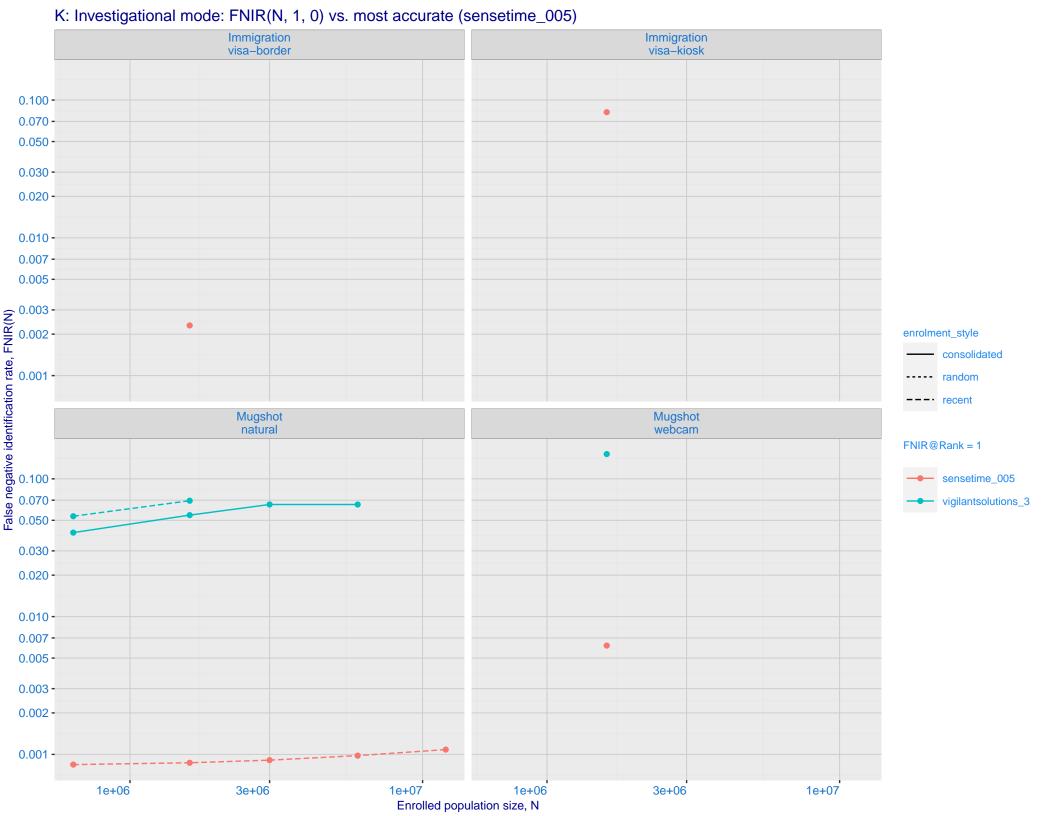
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



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)

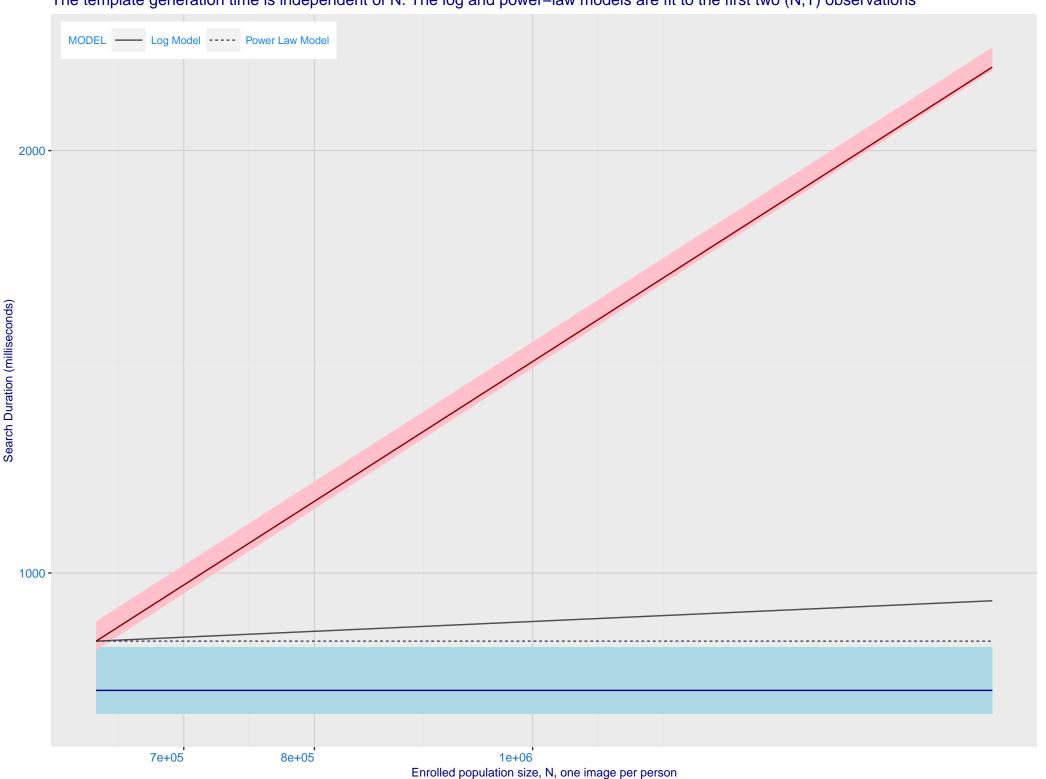






L: Investigational mode: FNIR(1600000, R, 0) by probe type sensetime_005 vigilantsolutions_3 0.100 -0.070 -0.050 -0.030 enrolment_style False negative identification rate, FNIR(N) - 00000 - 0000 - 0000 - 0000 - 0000 - 0000 - 0000 - 0000 - 0000 - 00000 - 0000 - 0000 - 0000 - 0000 - 0000 - 0000 - 0000 - 0000 - 000 lifetime_consolidated ---- random --- recent FNIR(R) N = 1600000 Immigration visa-border Immigration visa-kiosk Mugshot natural Mugshot webcam 0.003 -0.002 -0.001 -3 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



