A: Datasheet

Algorithm: sensetime_0

Developer: Sensetime Group

Submission Date: 2018_10_30

Template size: 4104 bytes

Template time (2.5 percentile): 692 msec

Template time (median): 694 msec

Template time (97.5 percentile): 746 msec

Investigation:

Frontal mugshot ranking 34 (out of 259) -- FNIR(1600000, 0, 1) = 0.0023 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 43 (out of 221) -- FNIR(1600000, 0, 1) = 0.0158 vs. lowest 0.0062 from sensetime_005

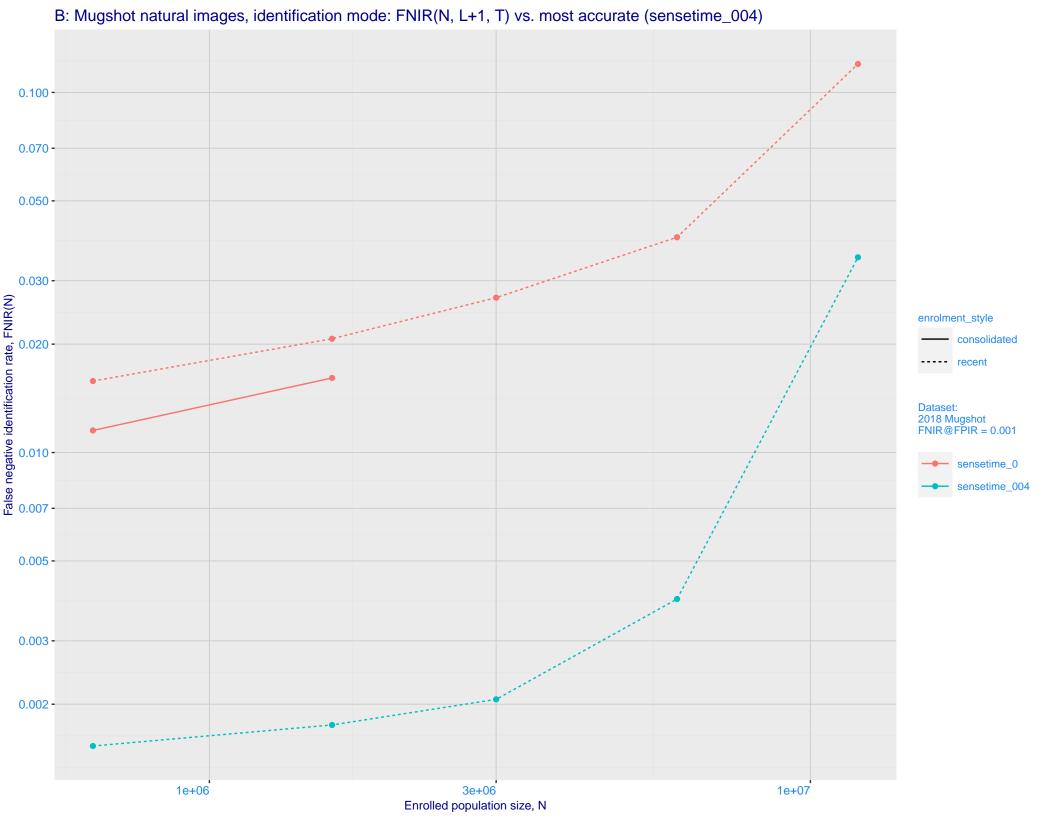
Mugshot profile ranking 48 (out of 190) -- FNIR(1600000, 0, 1) = 0.5280 vs. lowest 0.0591 from sensetime_005

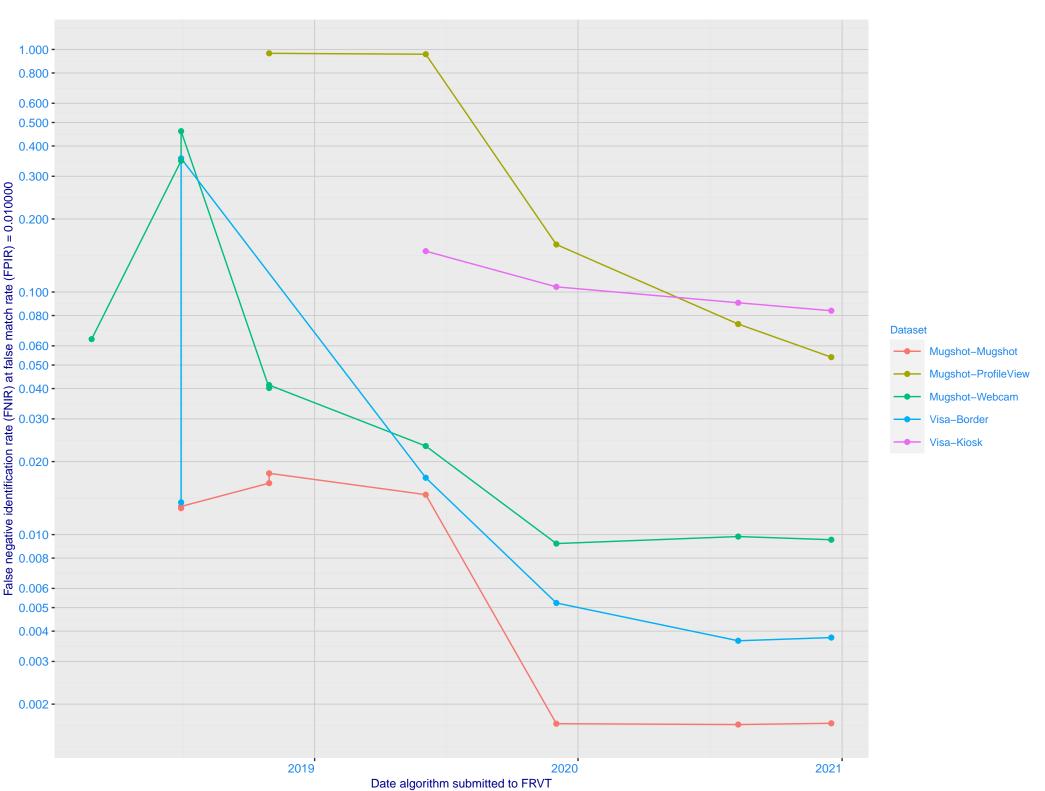
Identification:

Frontal mugshot ranking 33 (out of 259) -- FNIR(1600000, T, L+1) = 0.0207, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 29 (out of 219) -- FNIR(1600000, T, L+1) = 0.0624, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

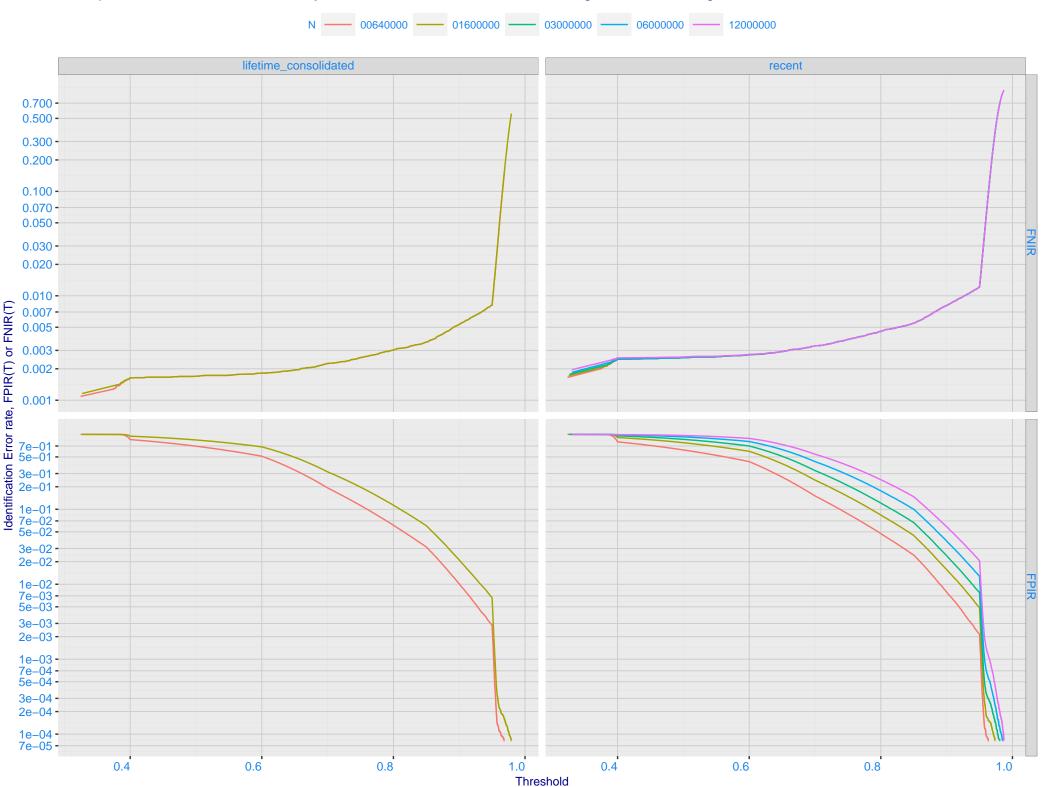
Mugshot profile ranking 186 (out of 189) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.1733 from sensetime_005



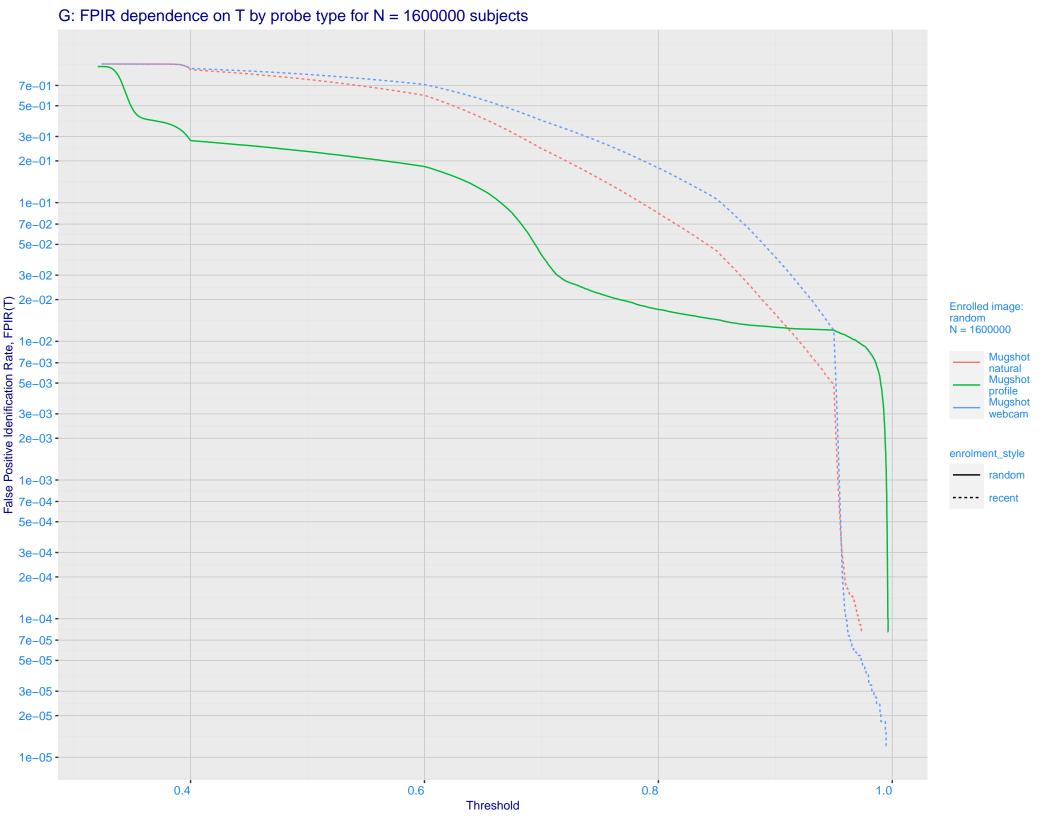


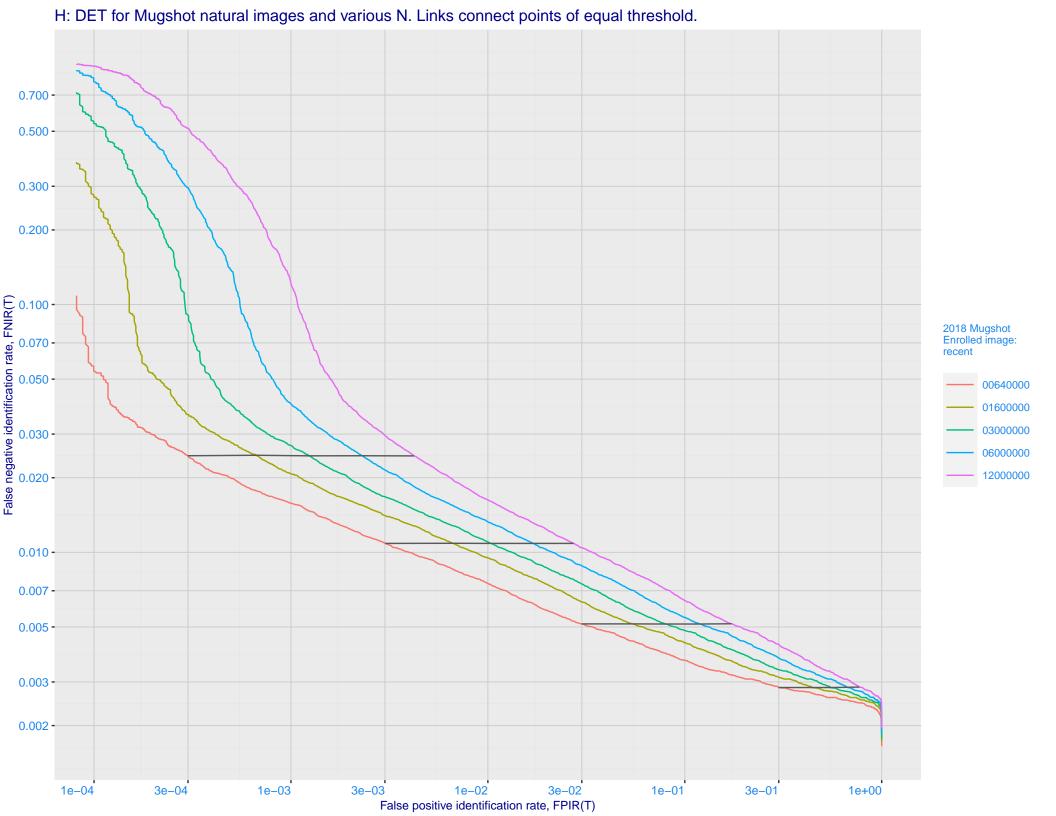
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Mugshot **Immigration** visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.002 - 0.002 - 0.001 - 0.500 -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

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

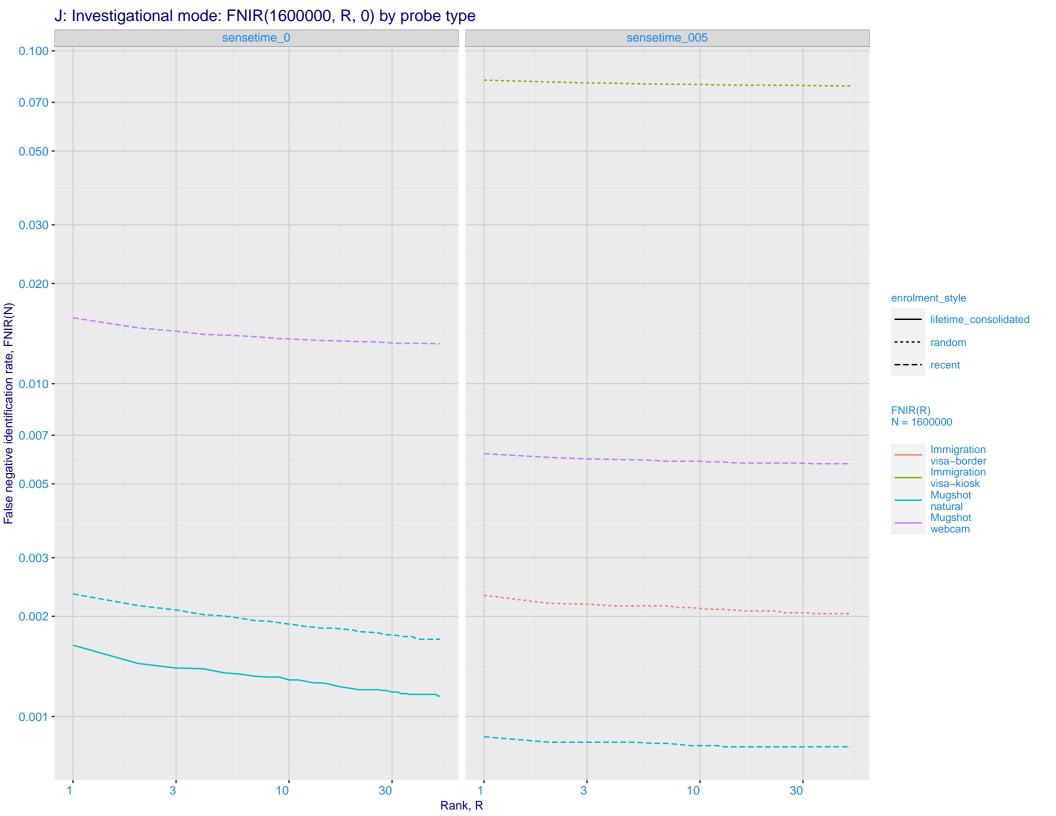


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -Selectivity. SEL(T) 5e-02 - 5e-02 - 2e-02 - 2e-02 - 1e-02 - 1e-02 - 2e-02 - 2 **Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam 1e-02 -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 -3e-02 1e-05 3e-05 1e-04 3e-04 1e-03 3e-03 1e-02 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)

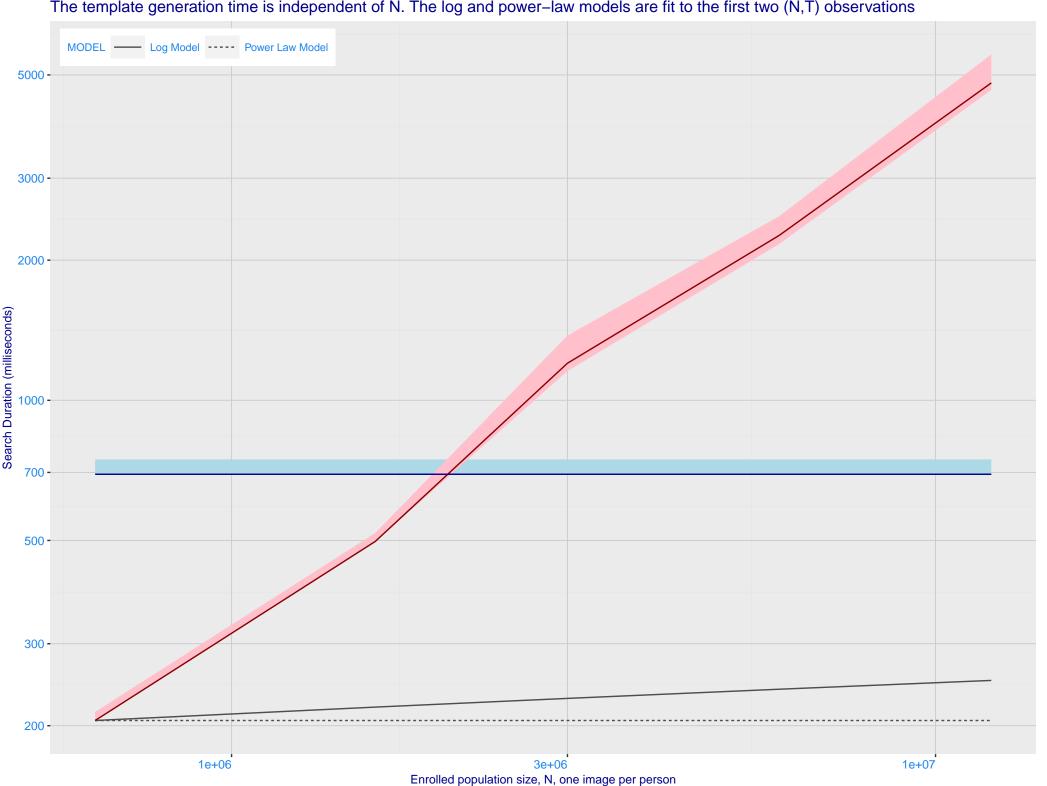




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Palse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.050 - 0.030 - 0. enrolment_style consolidated ---- random --- recent Mugshot webcam Mugshot natural FNIR@Rank = 1 sensetime_0 sensetime_005 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



