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 45 (out of 279) -- FNIR(1600000, 0, 1) = 0.0023 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 57 (out of 241) -- FNIR(1600000, 0, 1) = 0.0158 vs. lowest 0.0062 from sensetime_005

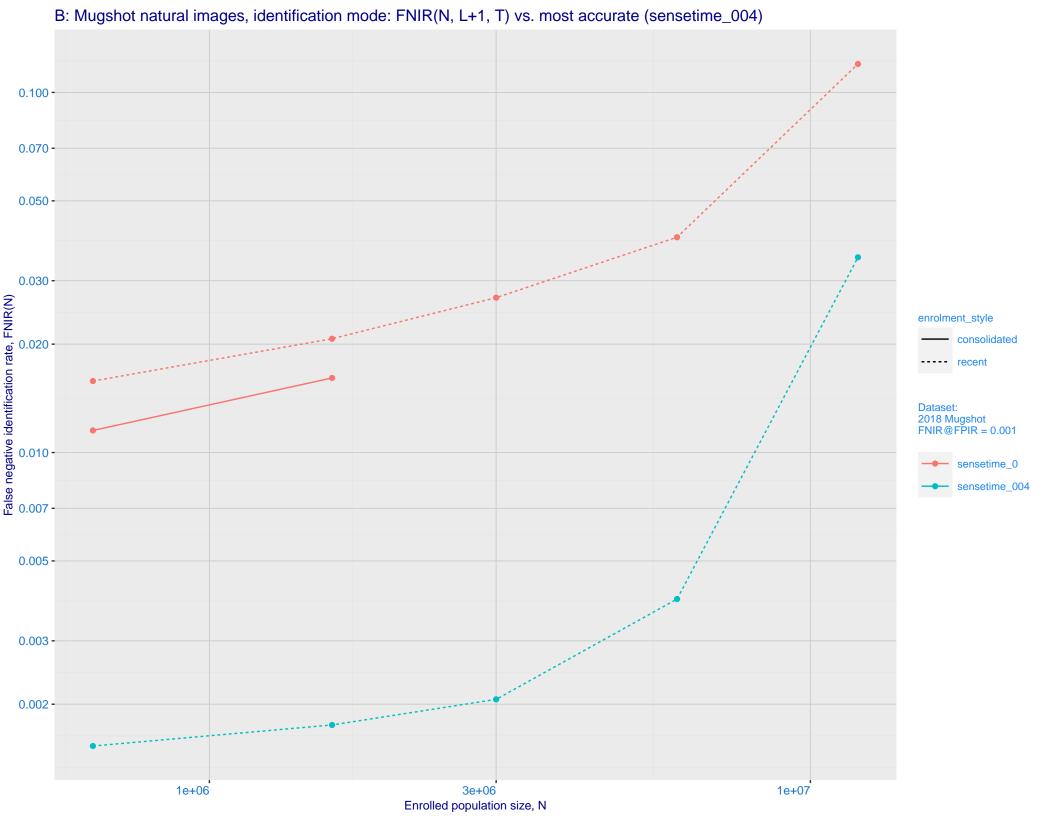
Mugshot profile ranking 62 (out of 210) -- FNIR(1600000, 0, 1) = 0.5280 vs. lowest 0.0587 from xforwardai_002

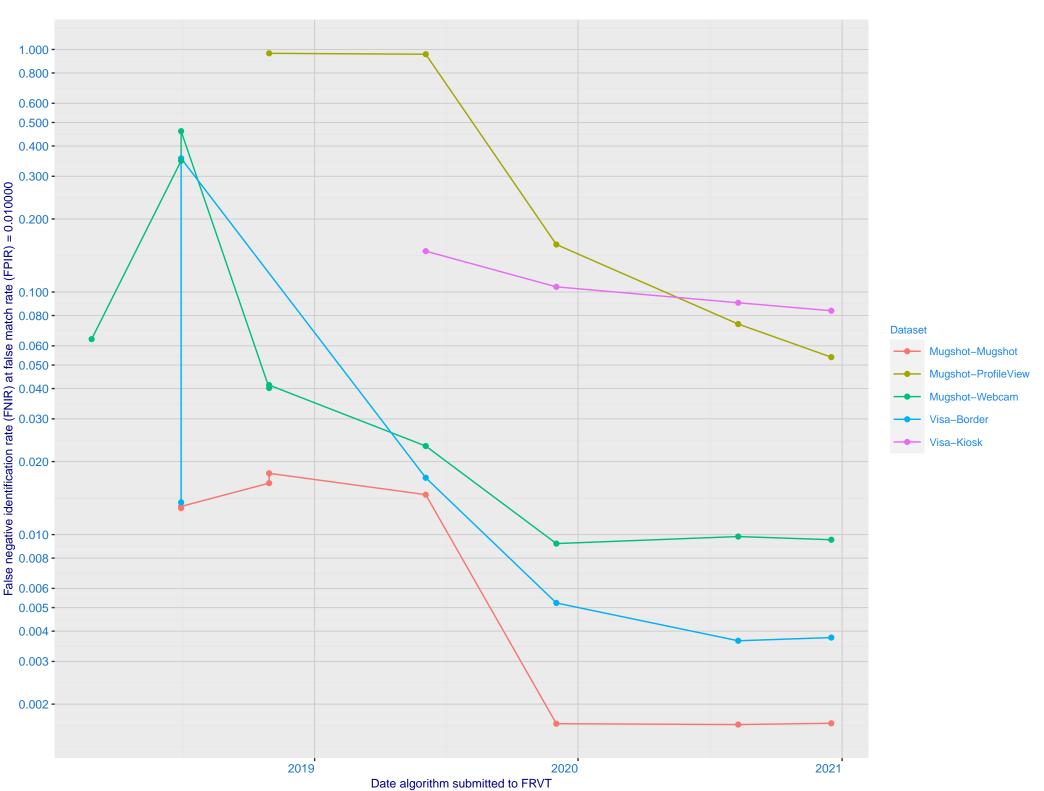
Identification:

Frontal mugshot ranking 42 (out of 279) -- FNIR(1600000, T, L+1) = 0.0207, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 39 (out of 236) -- FNIR(1600000, T, L+1) = 0.0624, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

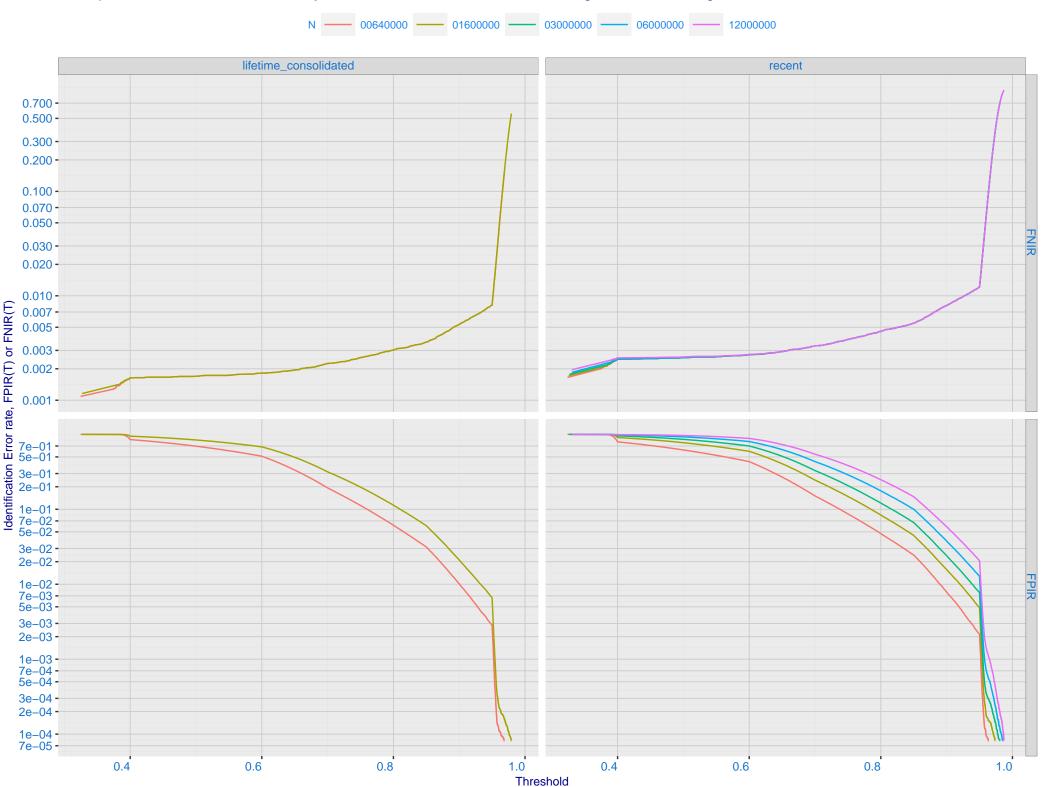
Mugshot profile ranking 206 (out of 209) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000



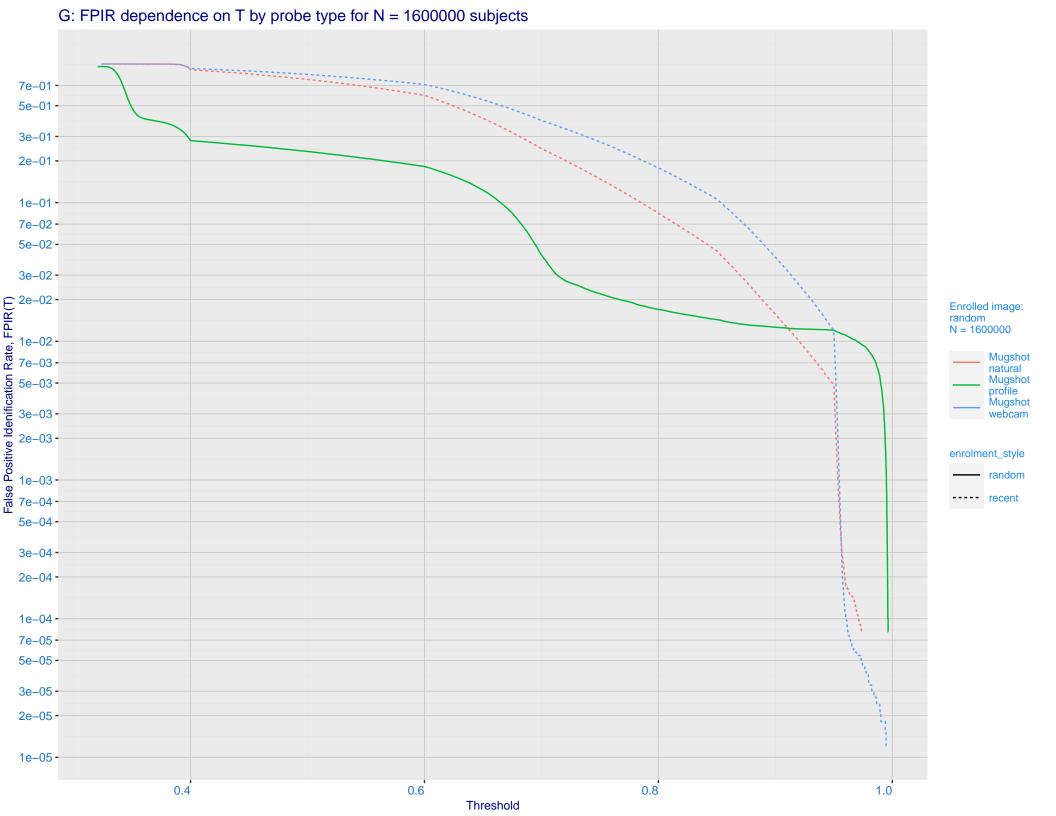


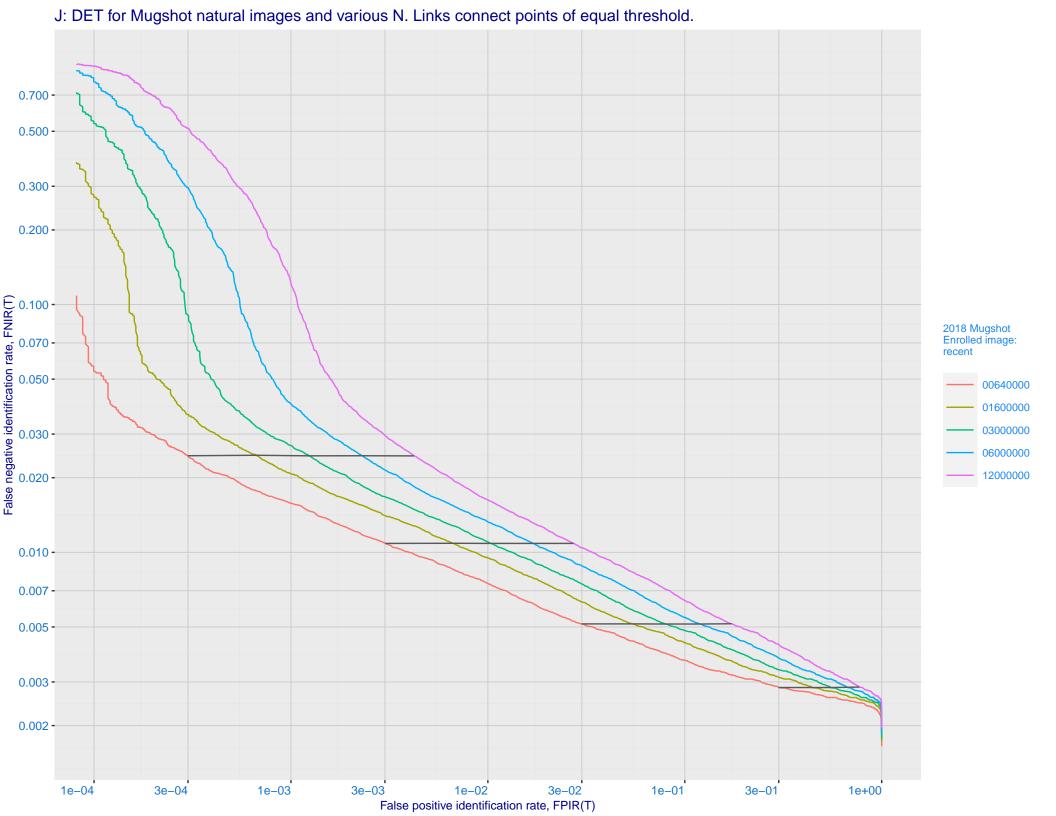
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.002 - 0.001 - 0.500 - 0.500 - 0.200 - 0. enrolment_style consolidated-ONE-MATE random-ONE-MATE recent-ONE-MATE unconsolidated-ALL-MATES unconsolidated-ANY-MATE 0.100 -0.070 sensetime 004 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

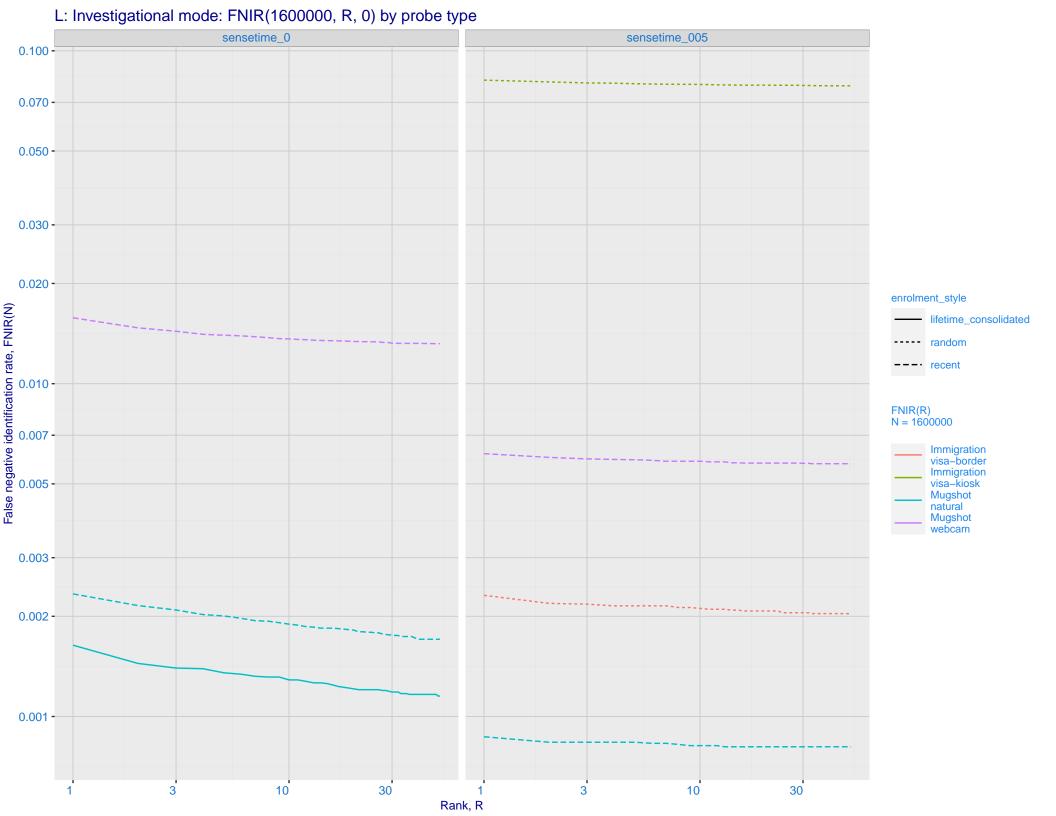


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -Selectivity. SEL(T) 7e-02 - 5e-02 - 5e-02 - 12e-02 - 12e **Enrolled images:** recent N = 1600000 Mugshot 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 -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)

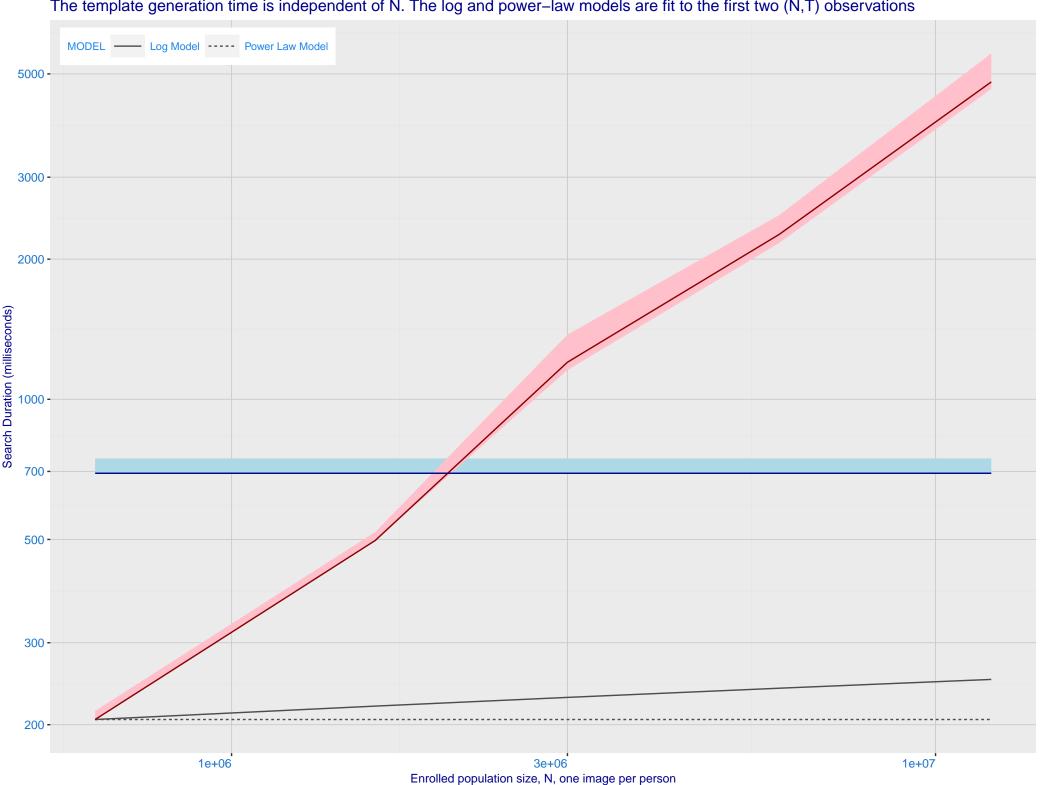




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Ealse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.050 - 0.030 - 0. enrolment_style consolidated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



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



