A: Datasheet

Algorithm: sensetime_1

Developer: Sensetime Group

Submission Date: 2018_10_30

Template size: 4104 bytes

Template time (2.5 percentile): 627 msec

Template time (median): 628 msec

Template time (97.5 percentile): 810 msec

Investigation:

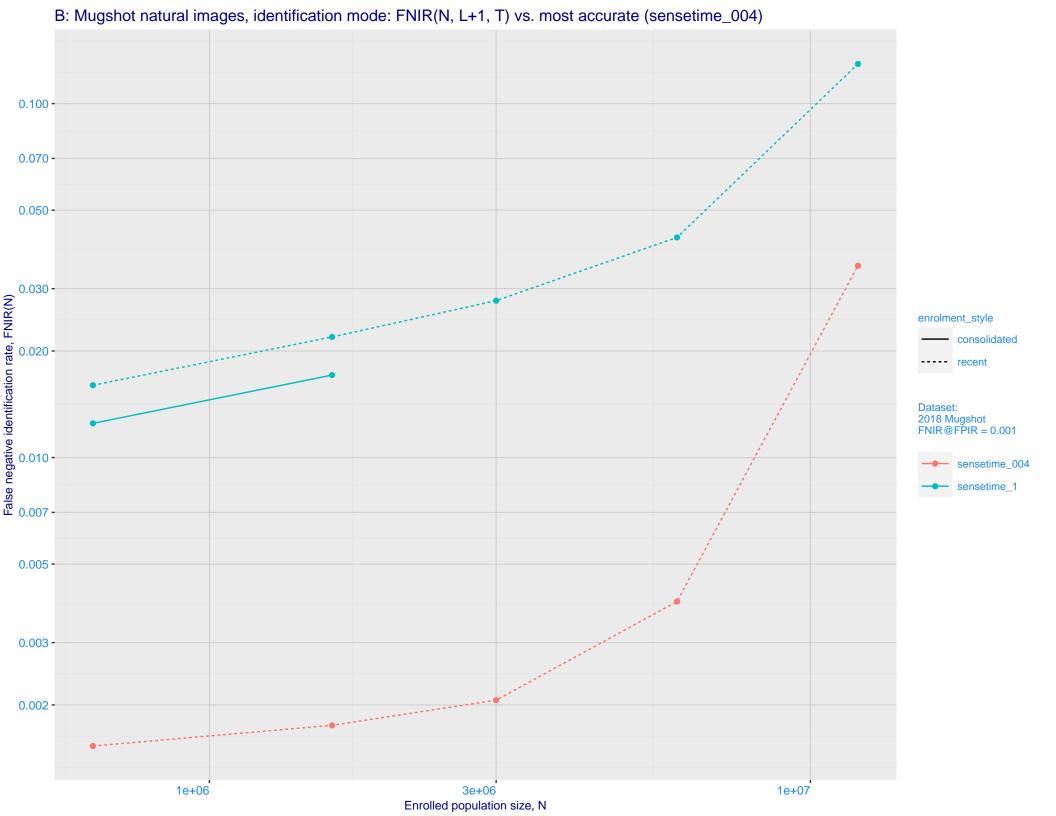
Frontal mugshot ranking 39 (out of 265) -- FNIR(1600000, 0, 1) = 0.0023 vs. lowest 0.0009 from sensetime_005

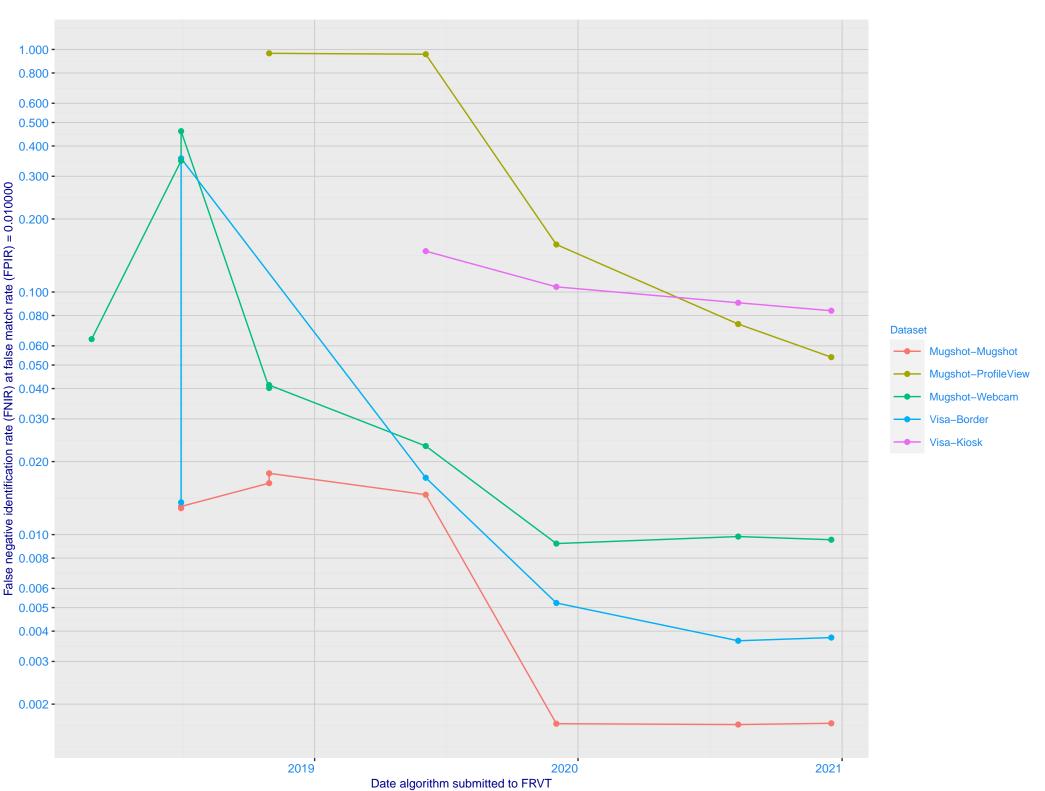
Mugshot webcam ranking 47 (out of 227) -- FNIR(1600000, 0, 1) = 0.0157 vs. lowest 0.0062 from sensetime_005

Identification:

Frontal mugshot ranking 39 (out of 265) -- FNIR(1600000, T, L+1) = 0.0219, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

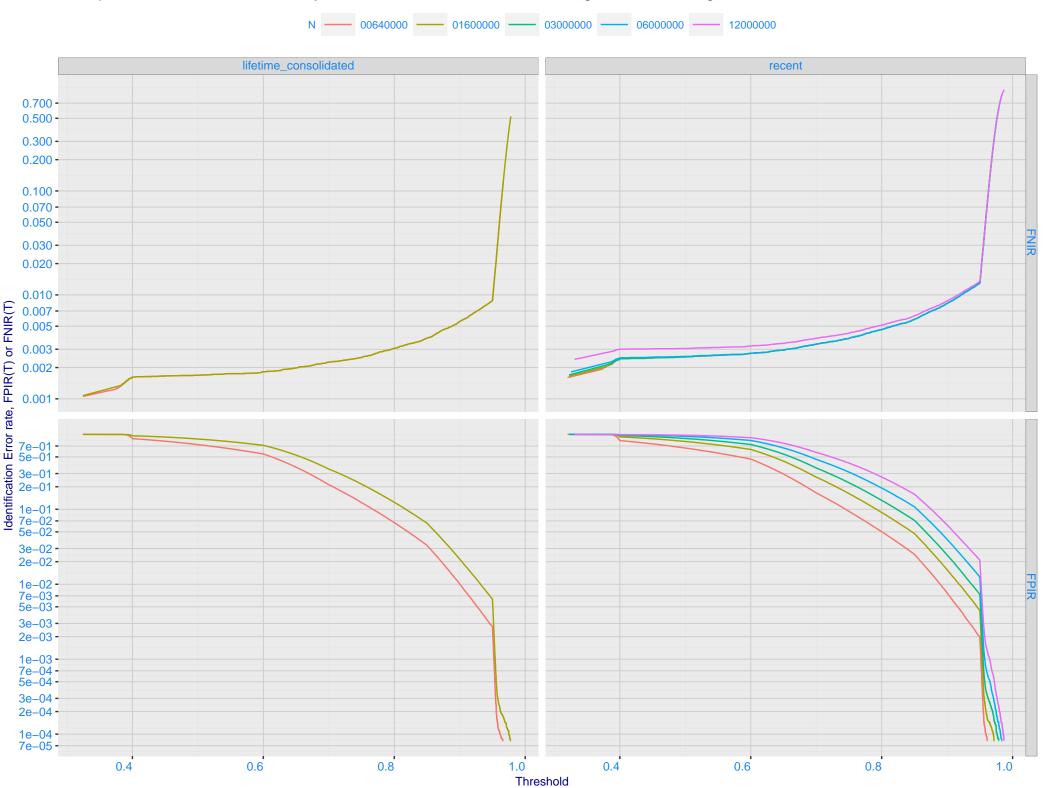
Mugshot webcam ranking 35 (out of 225) -- FNIR(1600000, T, L+1) = 0.0642, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003



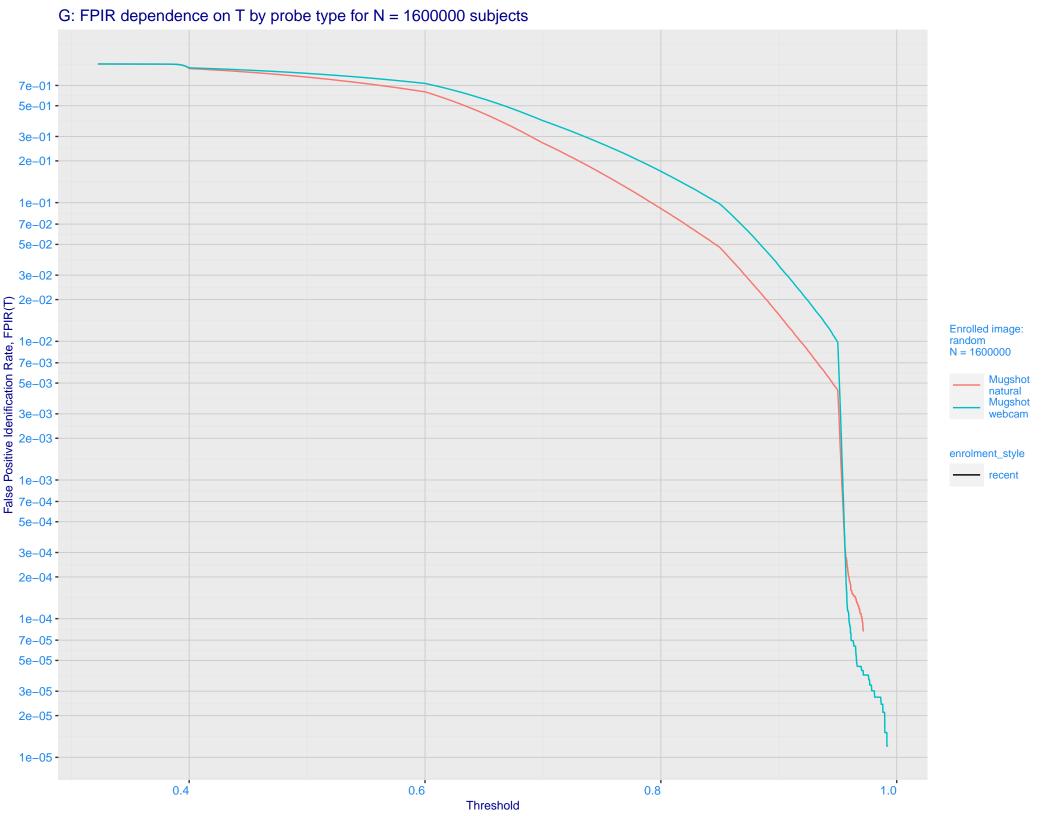


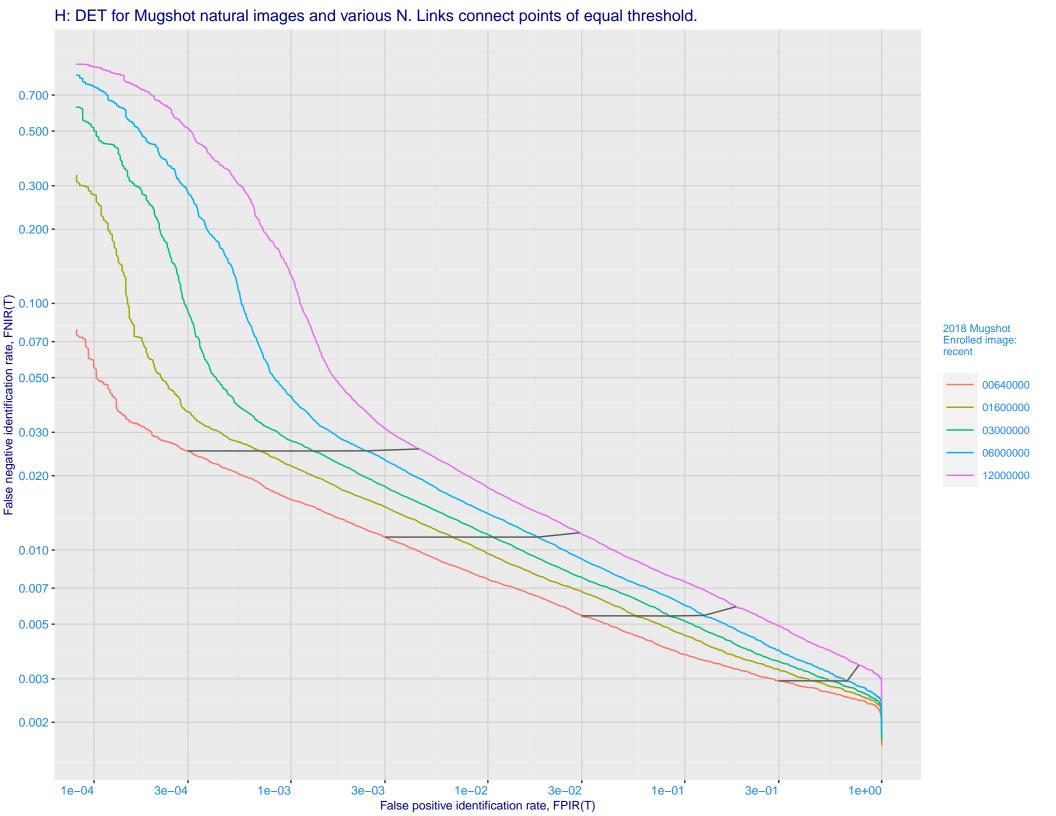
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Mugshot **Immigration** visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.000 - 0.000 - 0.500 - 0.200 - 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

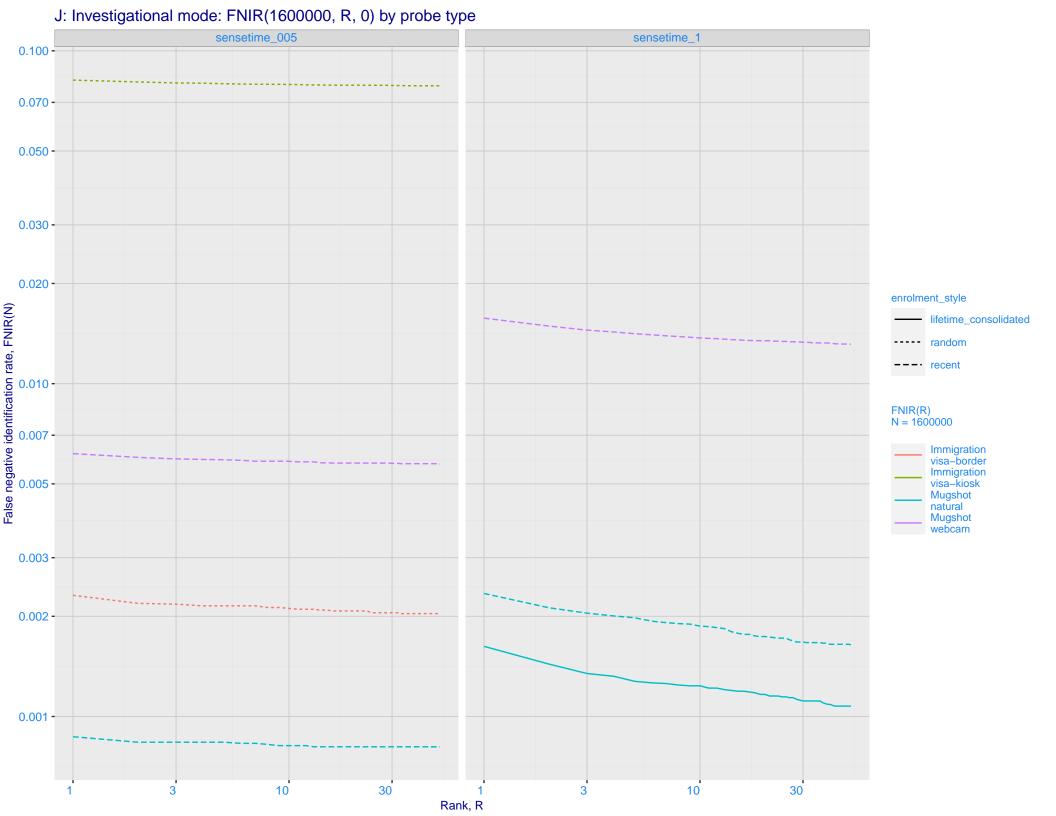


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 - 7e-02 - 3e-02 - 3e-02 - 2e-02 - 1e-02 **Enrolled images:** recent N = 1600000 Mugshot natural Mugshot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

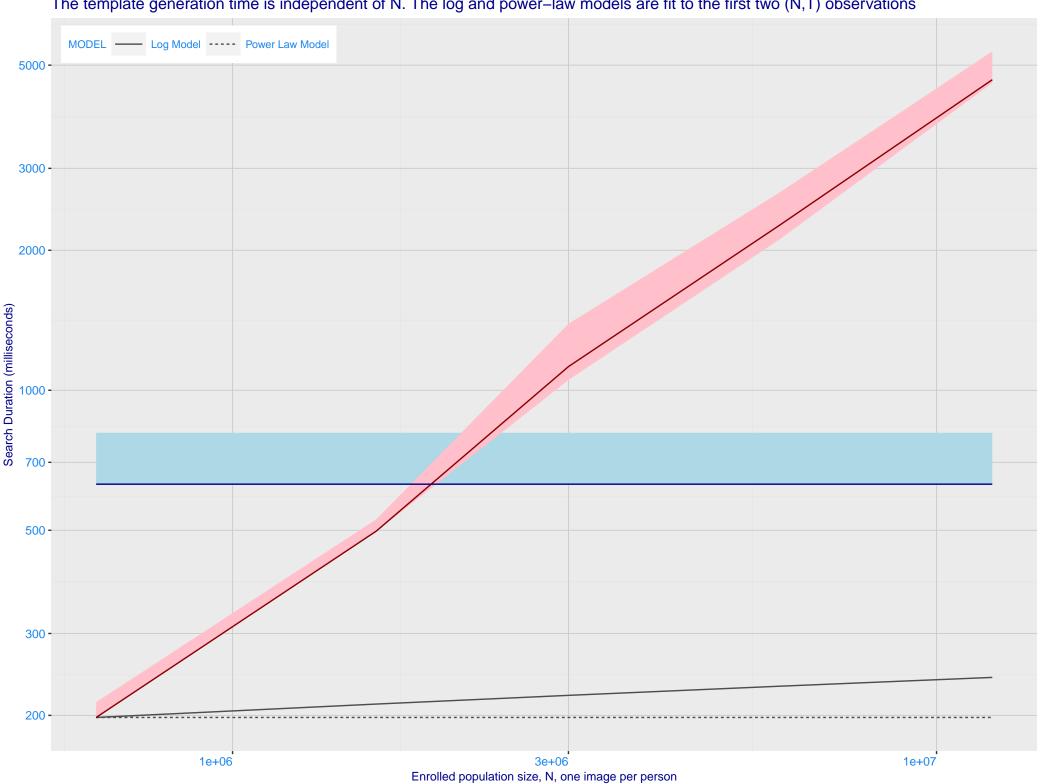




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Ealse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.030 - 0. FNIR@Rank = 1 sensetime_005 sensetime_1 Mugshot webcam Mugshot natural enrolment_style consolidated ---- random --- recent 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



