A: Datasheet

Algorithm: incode_1

Developer: Incode Technologies Inc

Submission Date: 2018_06_29

Template size: 2048 bytes

Template time (2.5 percentile): 661 msec

Template time (median): 684 msec

Template time (97.5 percentile): 744 msec

Investigation:

Frontal mugshot ranking 155 (out of 265) -- FNIR(1600000, 0, 1) = 0.0166 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 144 (out of 227) -- FNIR(1600000, 0, 1) = 0.0463 vs. lowest 0.0062 from sensetime_005

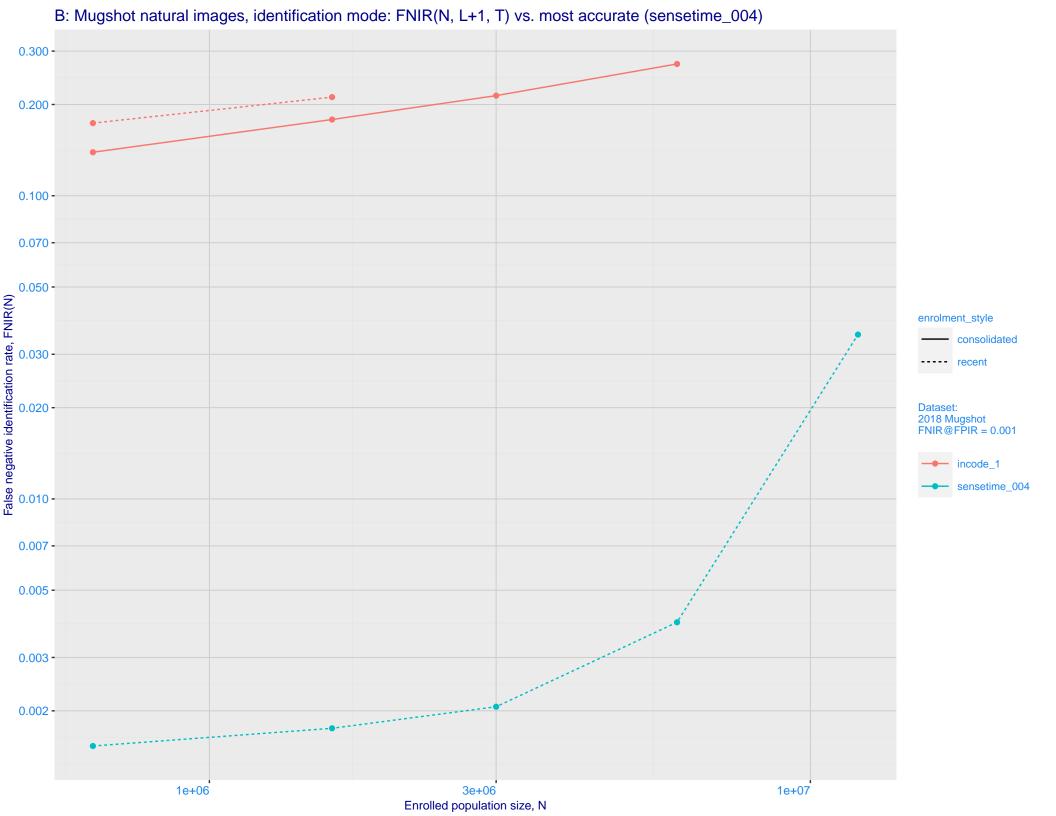
Mugshot profile ranking 86 (out of 196) -- FNIR(1600000, 0, 1) = 0.7616 vs. lowest 0.0591 from sensetime_005

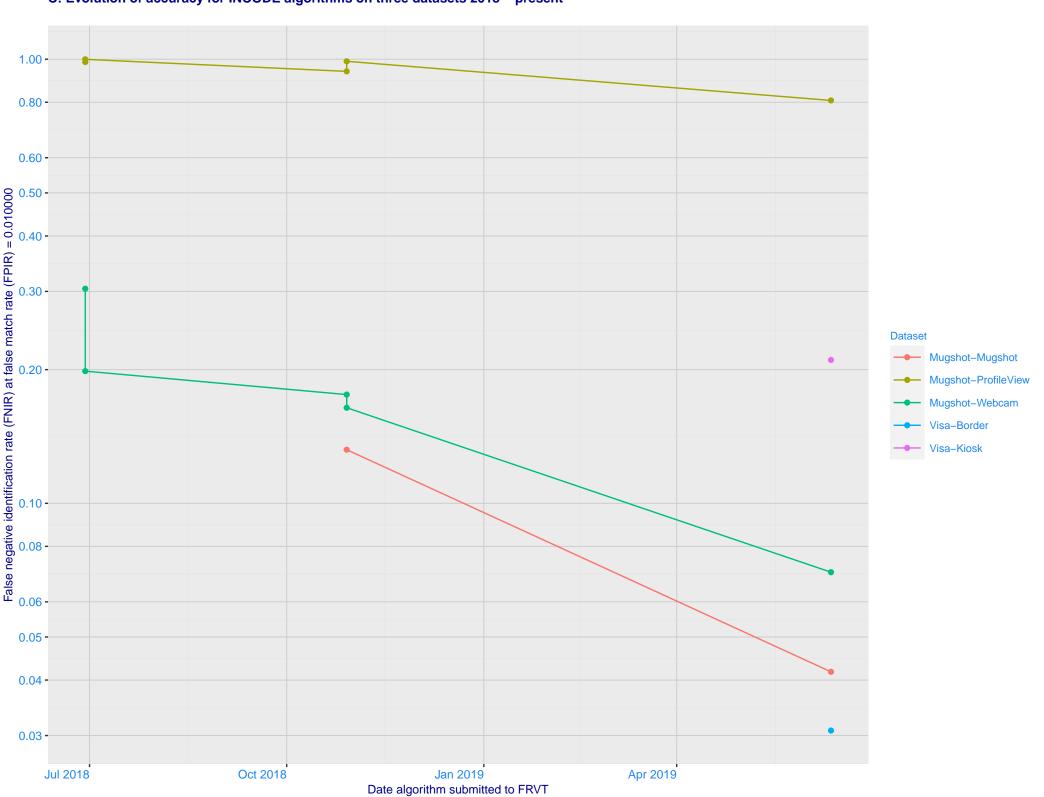
Identification:

Frontal mugshot ranking 177 (out of 265) -- FNIR(1600000, T, L+1) = 0.2115, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 155 (out of 225) -- FNIR(1600000, T, L+1) = 0.2964, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 176 (out of 195) -- FNIR(1600000, T, L+1) = 0.9999, FPIR=0.001000 vs. lowest 0.1331 from hr_000

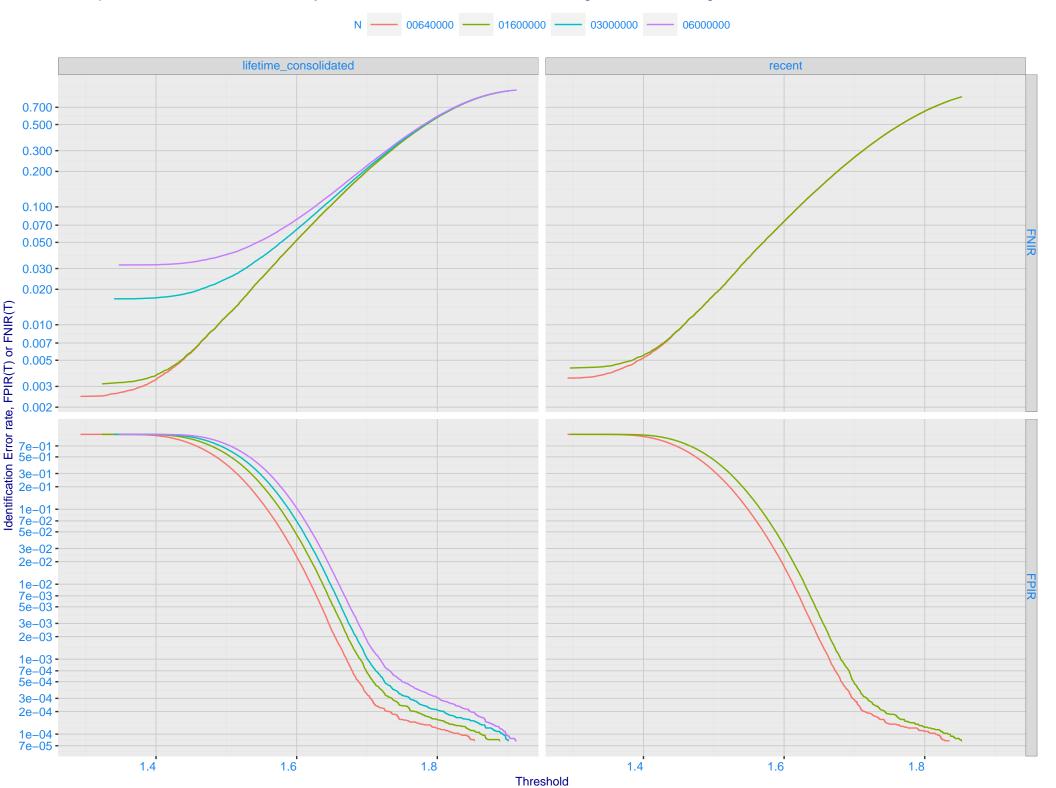




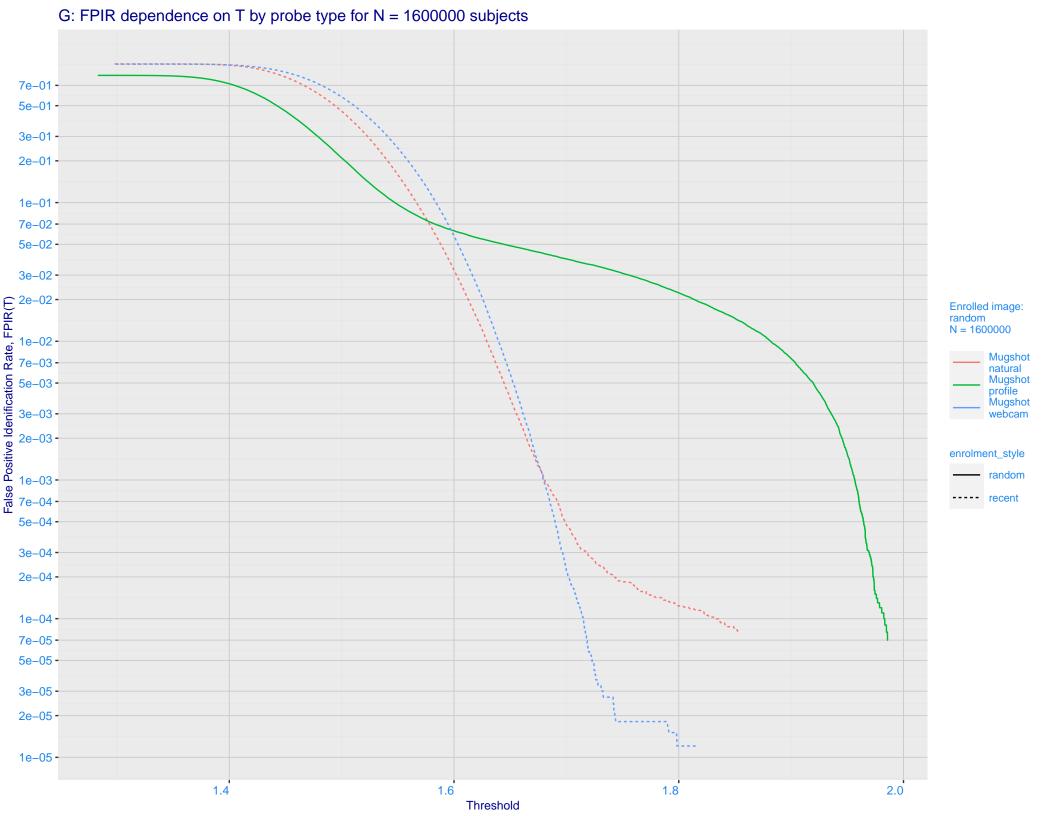
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment_style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

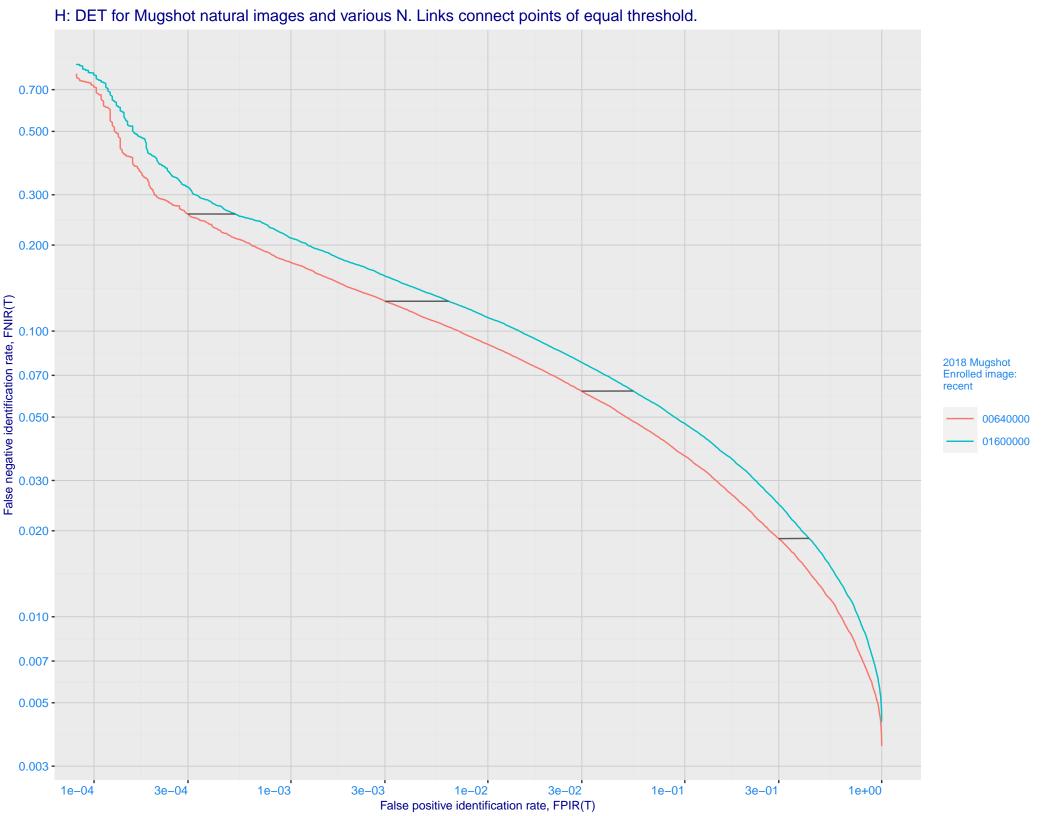
False positive identification rate, FPIR(T)

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

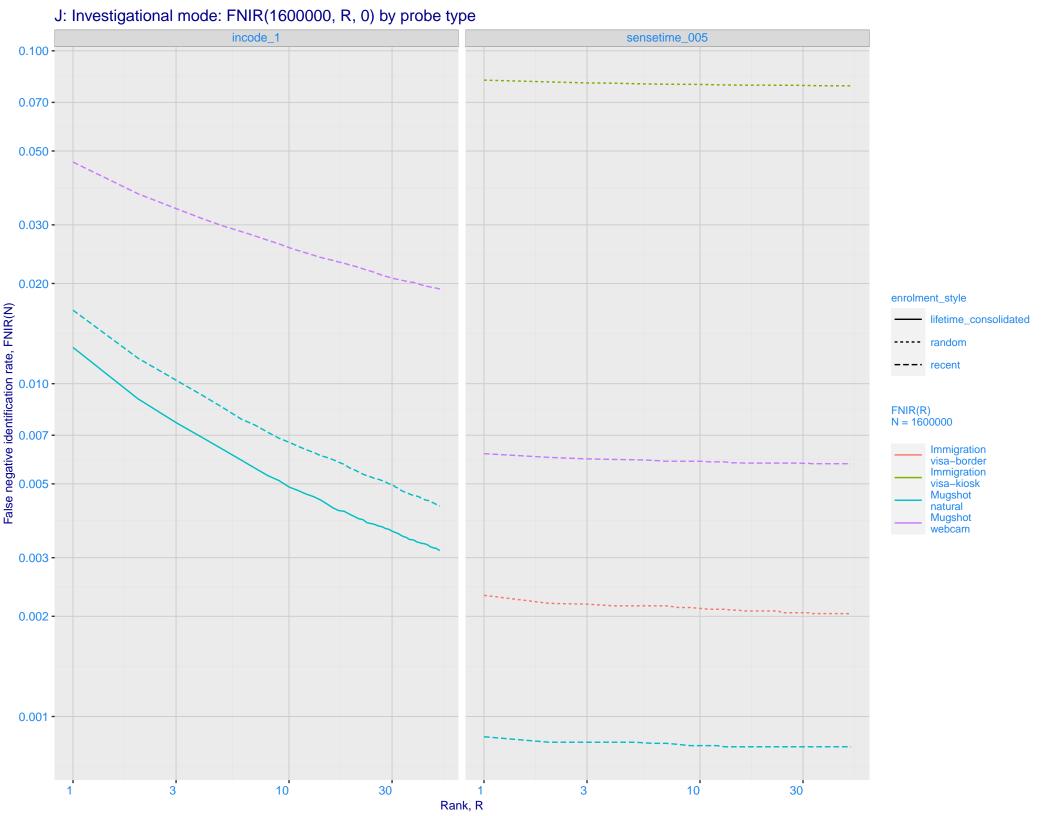


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -Selectivity, SEL(T) 7e-01 - 7e-02 - 5e-02 - 3e-02 - 3e **Enrolled images:** recent N = 1600000 Mugshot natural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

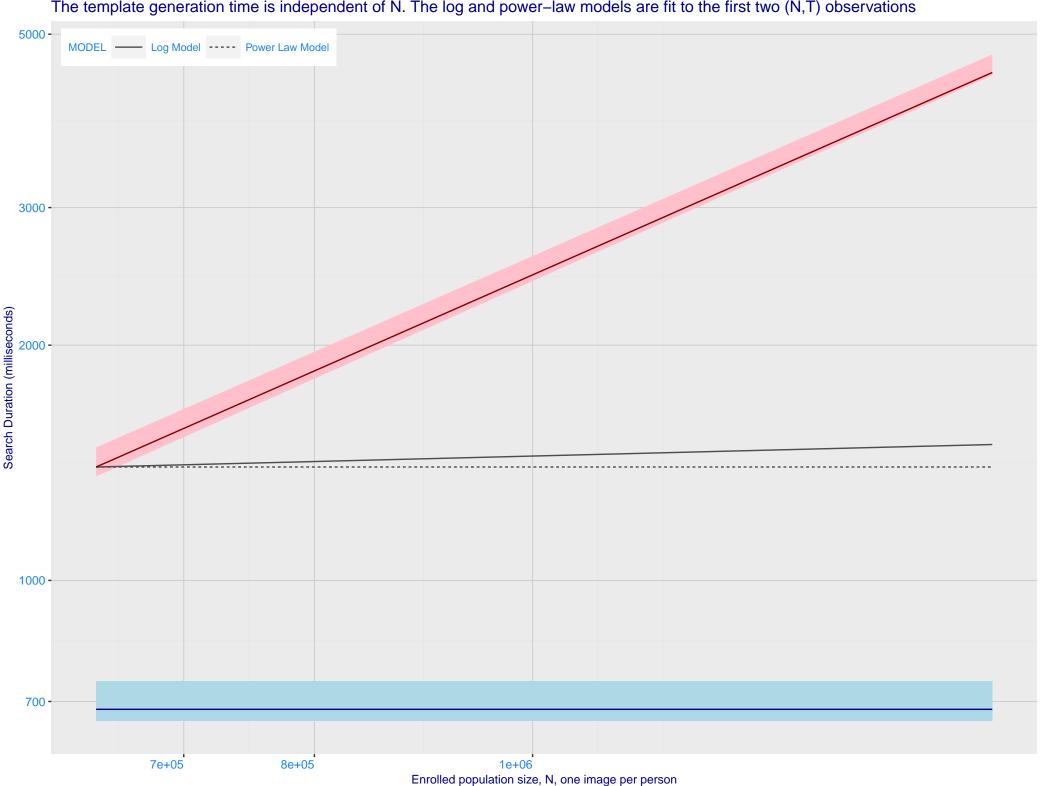




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Ealse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.030 - 0. enrolment_style consolidated ---- random --- recent Mugshot webcam Mugshot natural FNIR@Rank = 1 incode_1 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



