A: Datasheet

Algorithm: incode_0

Developer: Incode Technologies Inc

Submission Date: 2018_06_29

Template size: 1024 bytes

Template time (2.5 percentile): 168 msec

Template time (median): 189 msec

Template time (97.5 percentile): 219 msec

Investigation:

Frontal mugshot ranking 197 (out of 259) -- FNIR(1600000, 0, 1) = 0.0489 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 173 (out of 221) -- FNIR(1600000, 0, 1) = 0.0996 vs. lowest 0.0062 from sensetime_005

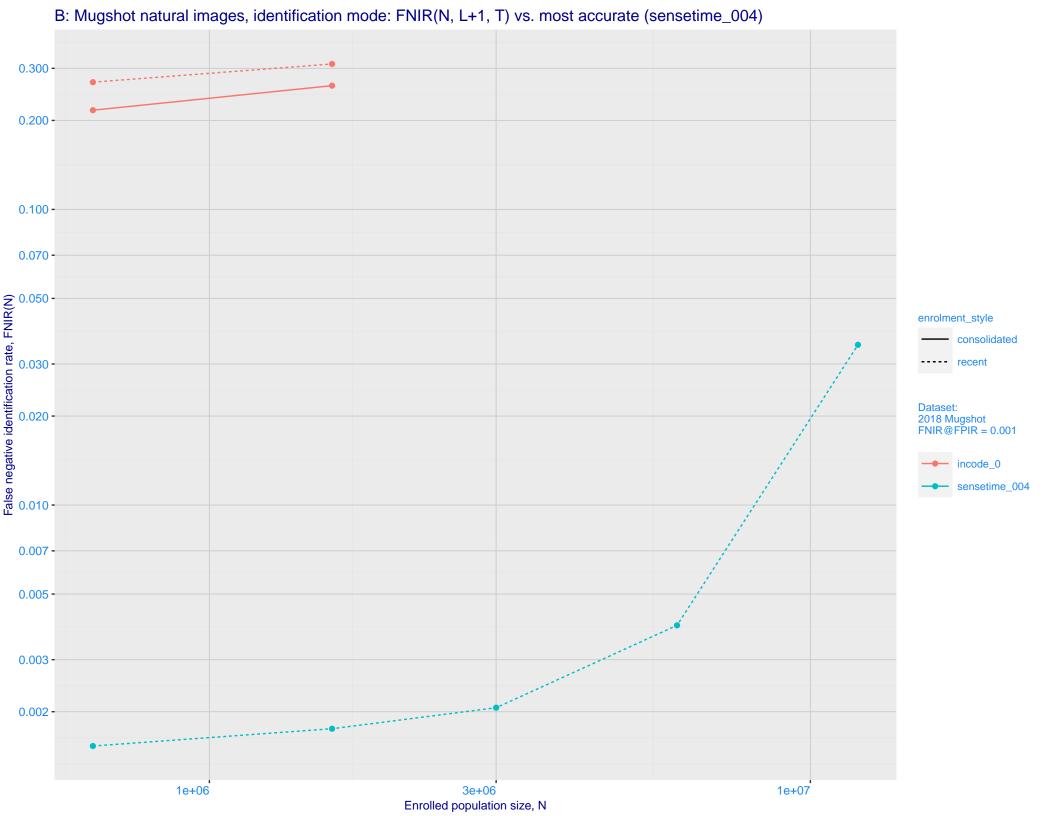
Mugshot profile ranking 135 (out of 190) -- FNIR(1600000, 0, 1) = 0.9513 vs. lowest 0.0591 from sensetime_005

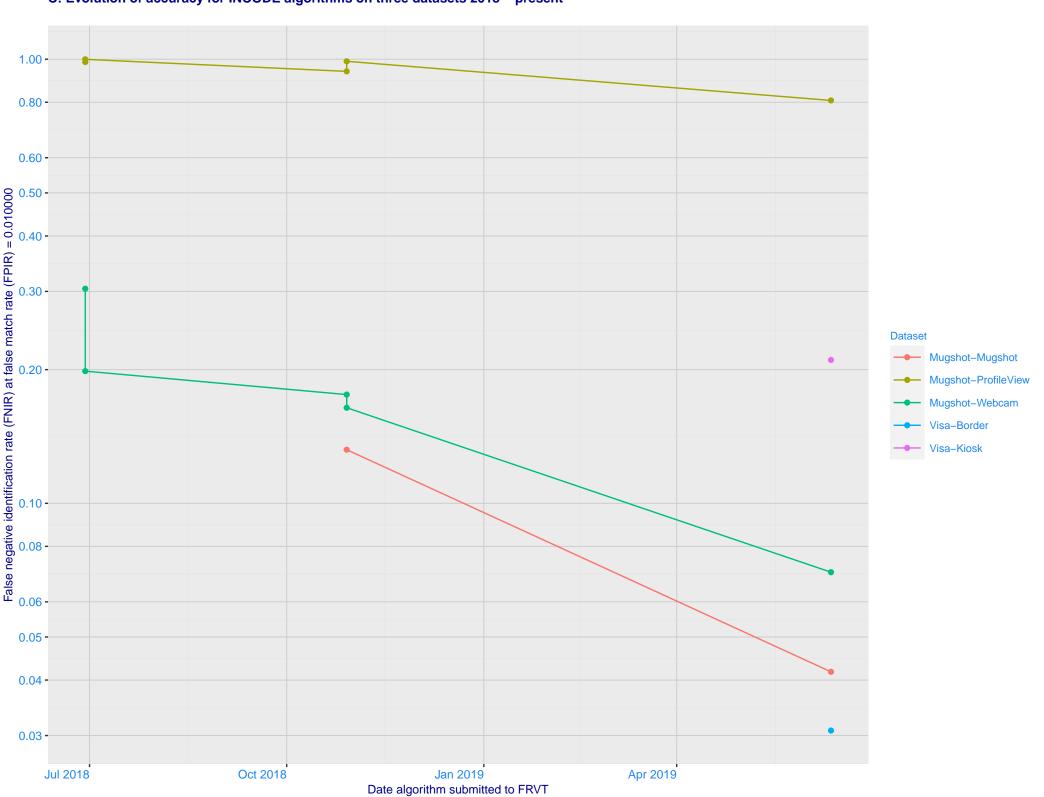
Identification:

Frontal mugshot ranking 191 (out of 259) -- FNIR(1600000, T, L+1) = 0.3104, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 168 (out of 219) -- FNIR(1600000, T, L+1) = 0.4195, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 116 (out of 189) -- FNIR(1600000, T, L+1) = 0.9981, FPIR=0.001000 vs. lowest 0.1733 from sensetime_005



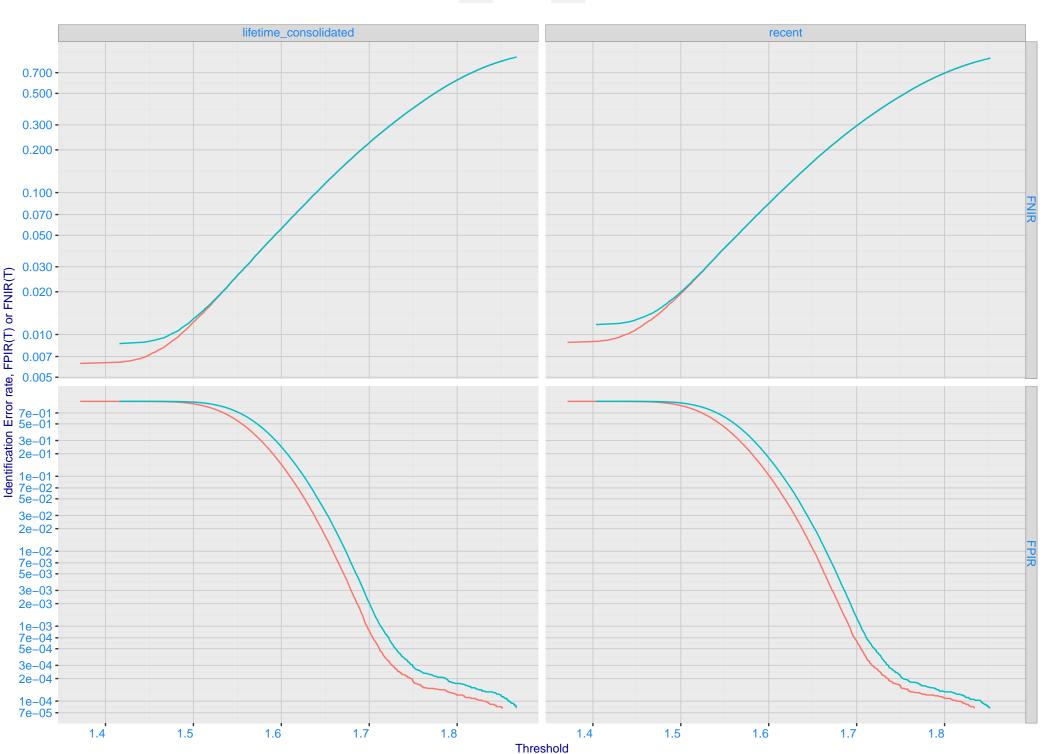


D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.002 - 0.001 - 0.200 - 0.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

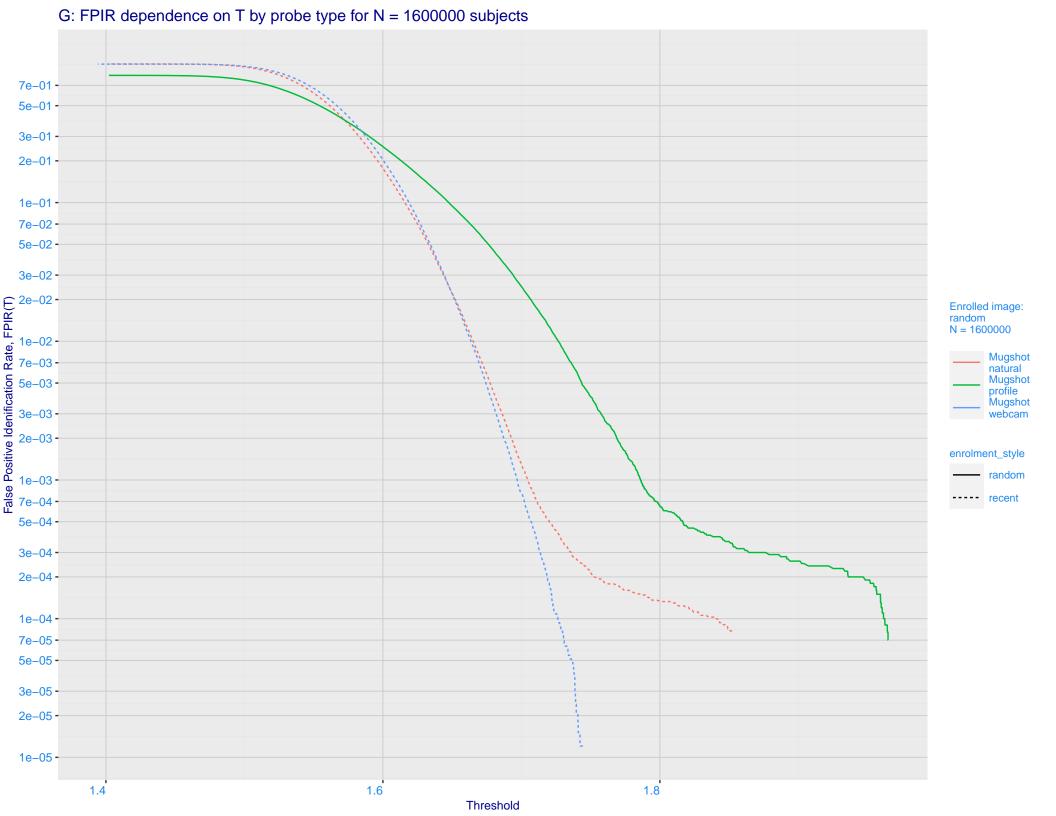
False positive identification rate, FPIR(T)

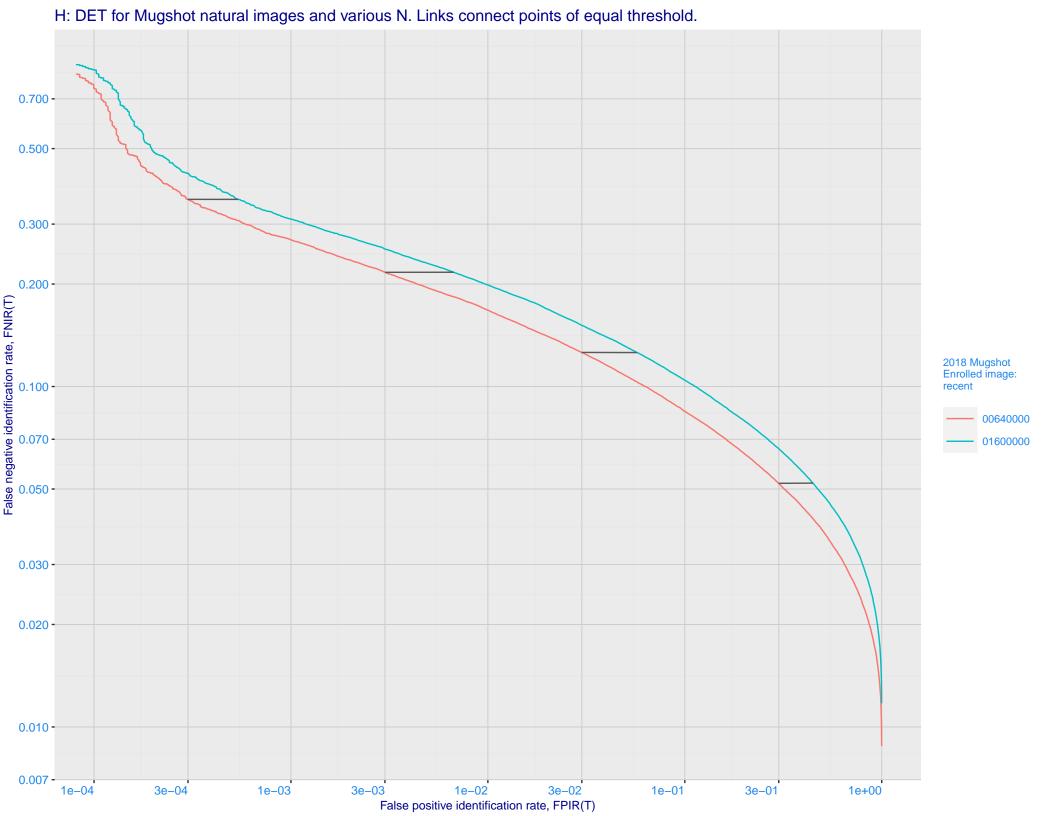
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images





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 -1e-01 -(E) 7e-02 - 7e **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)





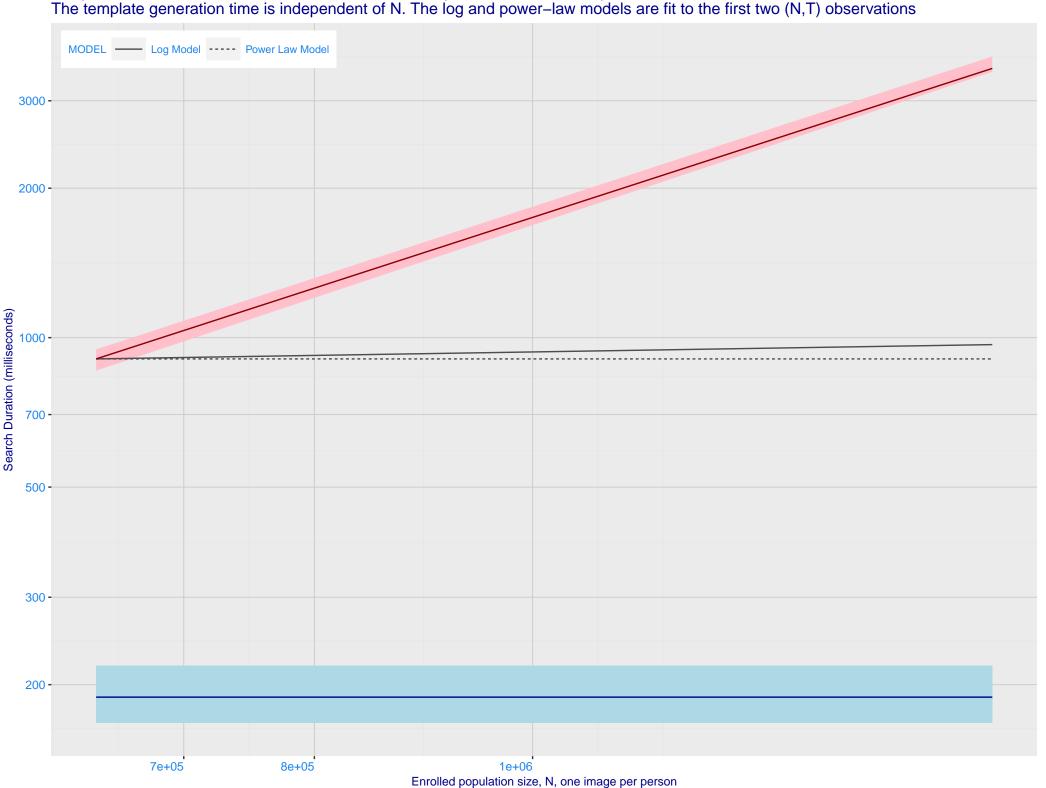
I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 - (N) 0.002 - 0.001 - 0.001 - 0.000 - 0. enrolment_style consolidated ---- random --- recent Mugshot webcam Mugshot natural FNIR@Rank = 1 incode_0 sensetime_005 0.030 -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

J: Investigational mode: FNIR(1600000, R, 0) by probe type incode_0 sensetime_005 0.100 -0.070 -0.050 -0.030 enrolment_style False negative identification rate, FNIR(N)

0.000

0.0007 lifetime_consolidated ---- random --- recent FNIR(R) N = 1600000 Immigration visa-border Immigration visa-kiosk Mugshot natural Mugshot webcam 0.003 -0.002 -0.001 -10 30 3 10 30 Rank, R

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



