A: Datasheet

Algorithm: tiger_3

Developer: TigerIT Americas LLC

Submission Date: 2018_10_30

Template size: 2052 bytes

Template time (2.5 percentile): 427 msec

Template time (median): 462 msec

Template time (97.5 percentile): 512 msec

Investigation:

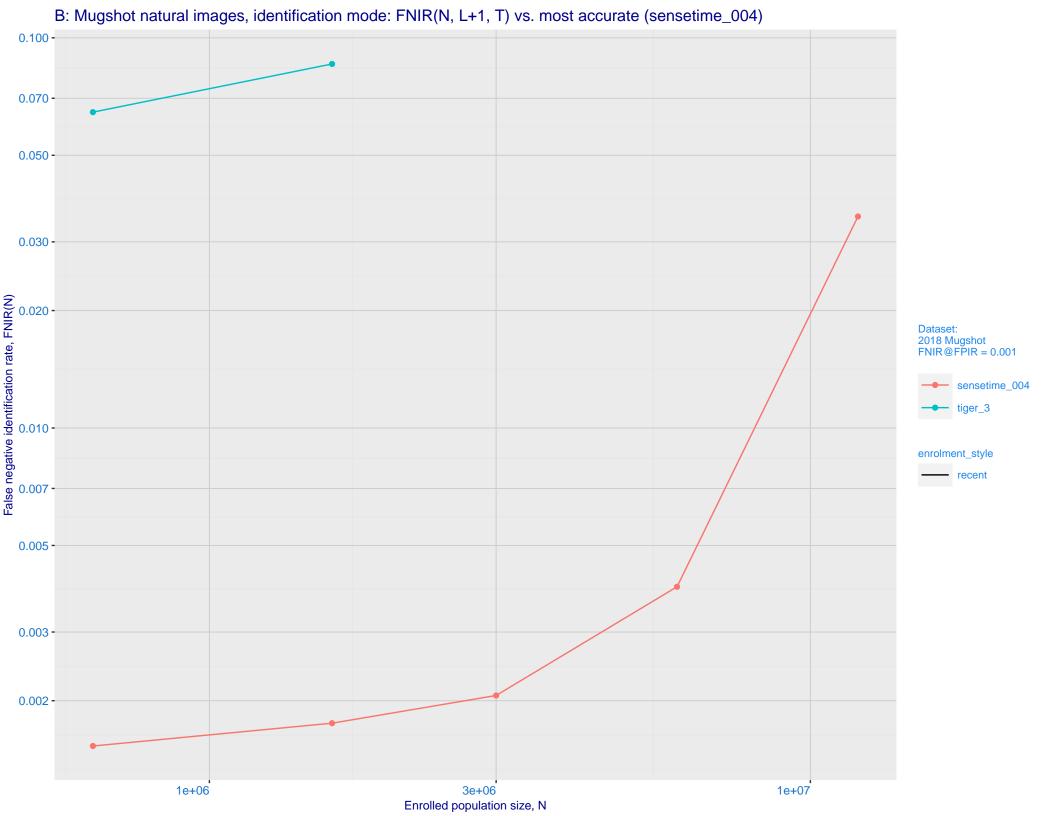
Frontal mugshot ranking 100 (out of 279) -- FNIR(1600000, 0, 1) = 0.0056 vs. lowest 0.0009 from sensetime_005

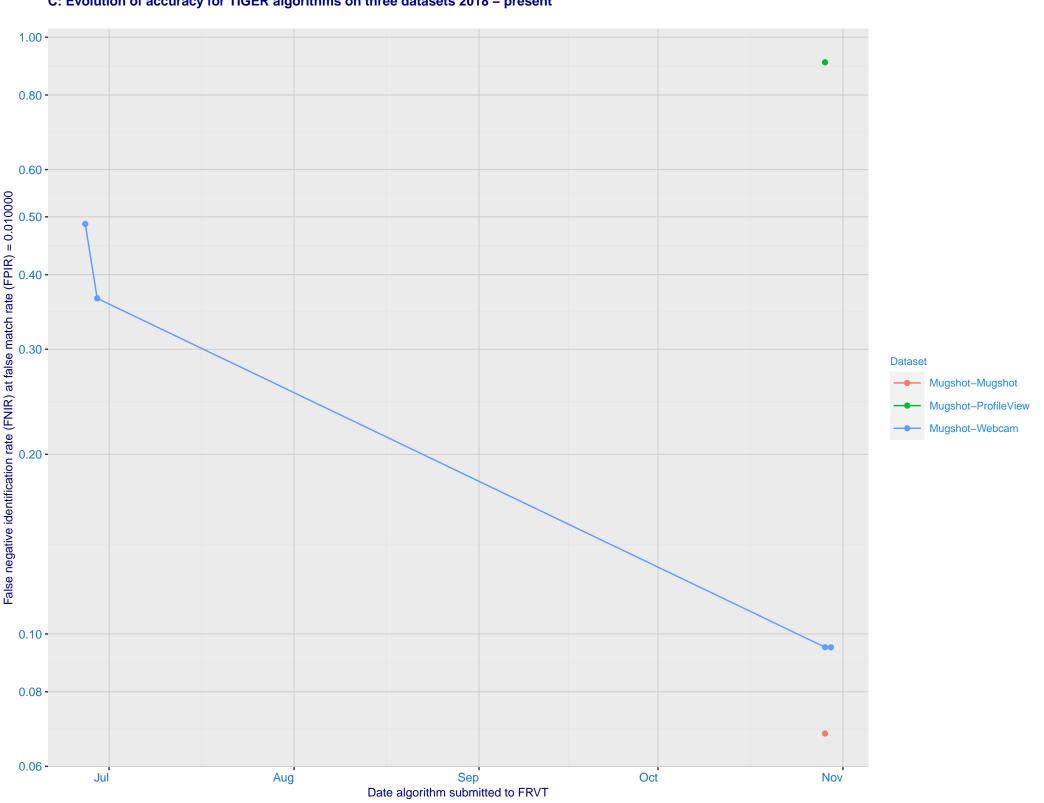
Mugshot webcam ranking 100 (out of 241) -- FNIR(1600000, 0, 1) = 0.0229 vs. lowest 0.0062 from sensetime_005

Identification:

Frontal mugshot ranking 131 (out of 279) -- FNIR(1600000, T, L+1) = 0.0857, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 121 (out of 236) -- FNIR(1600000, T, L+1) = 0.1584, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003



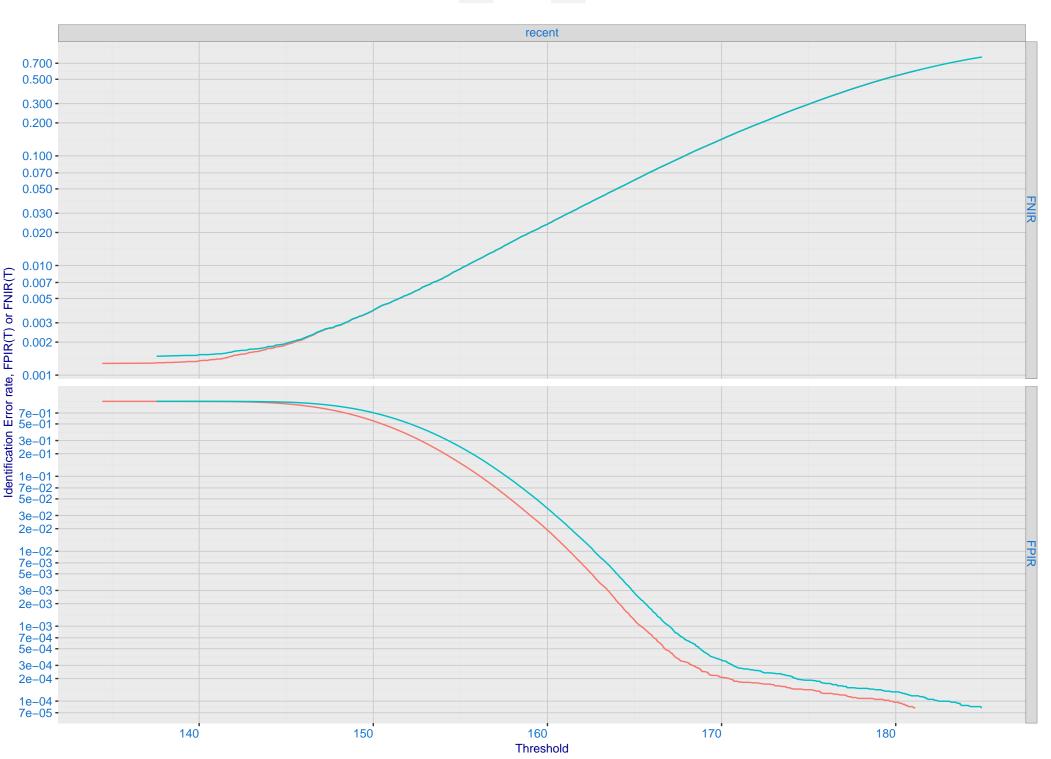


D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 sensetime 004 0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.002 - 0.001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

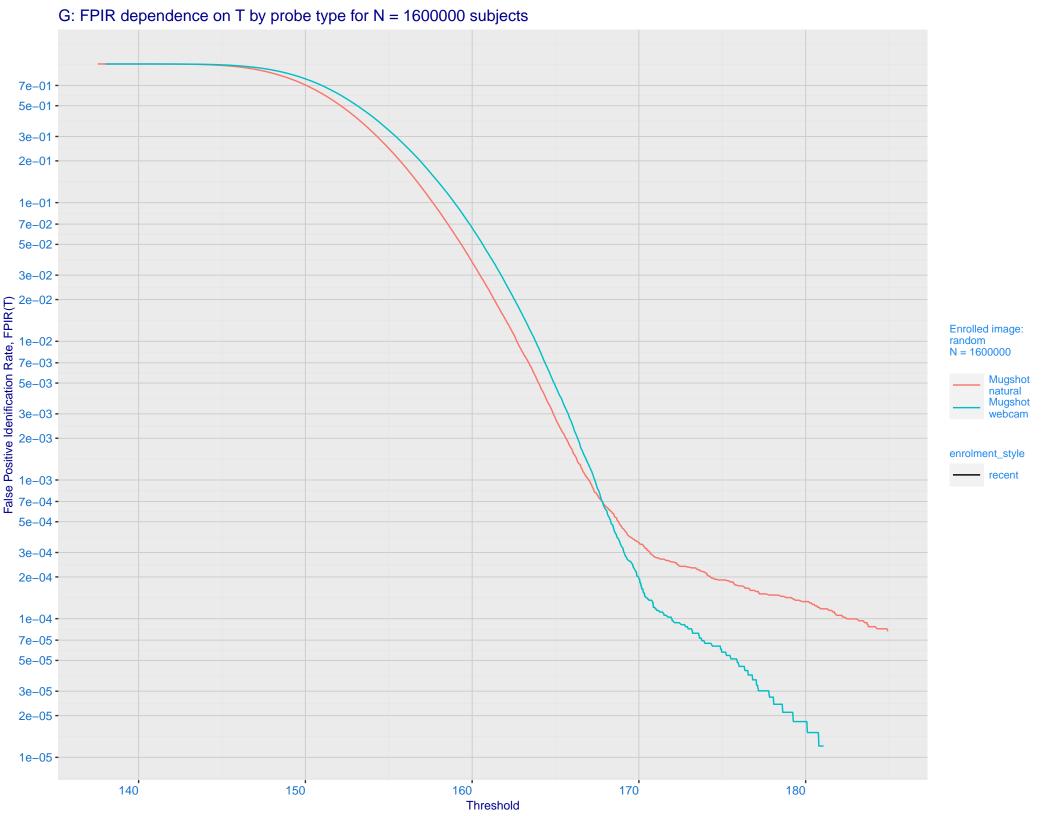
False positive identification rate, FPIR(T)

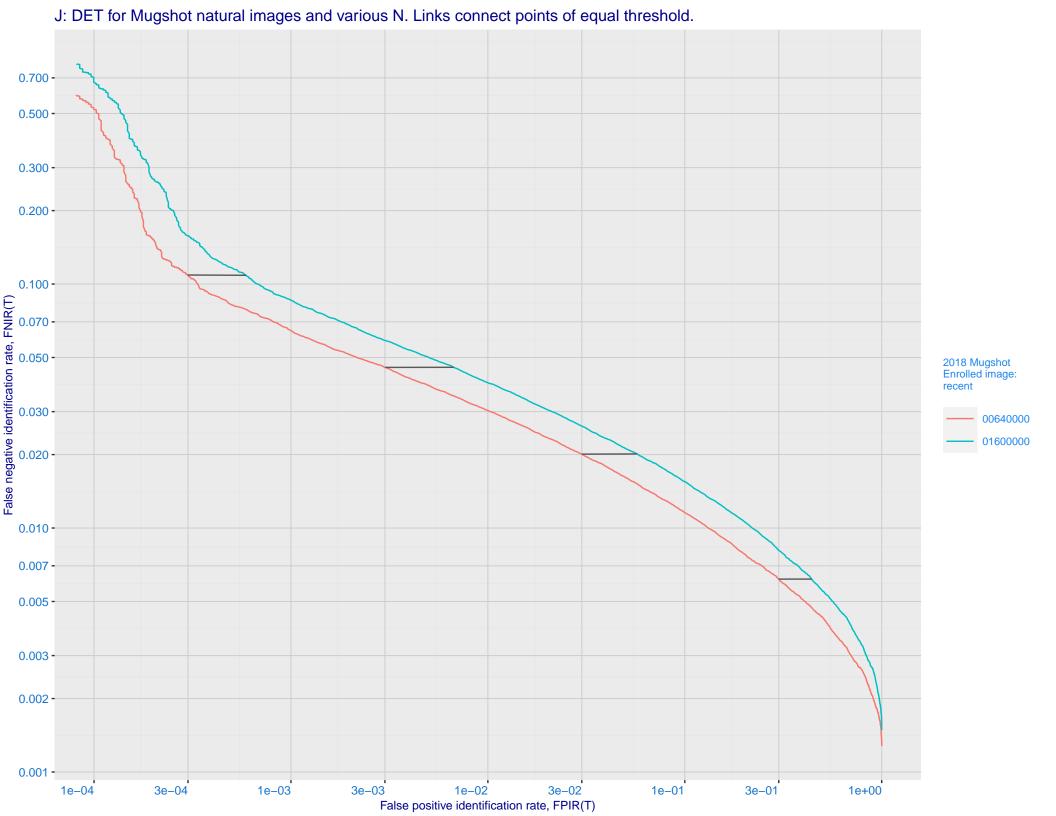
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



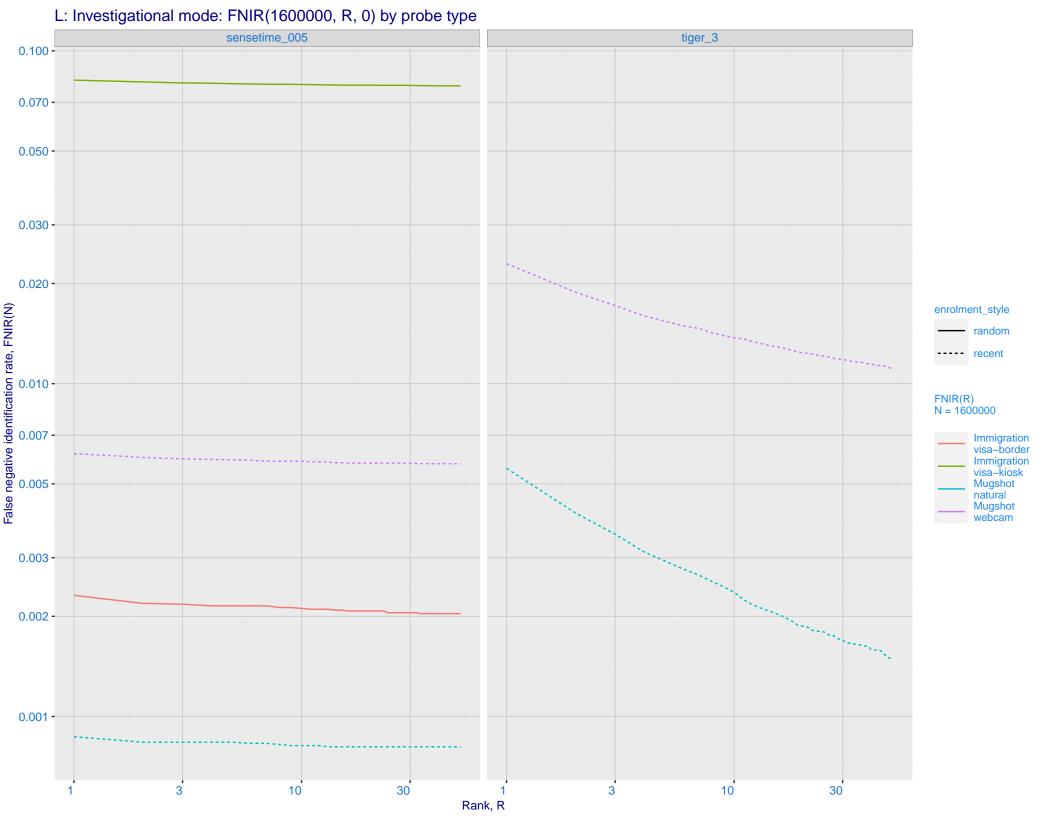


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 · 2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 -5e-02 -3e-02 -3e-02 -1e-02 -**Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam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





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 - 0.030 - 0. enrolment_style - random ---- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 sensetime_005 tiger_3 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 Log Model ---- Power Law Model 500 -300 -Search Duration (milliseconds)
00 7e+05 8e+05 1e+06 Enrolled population size, N, one image per person

Q: Identification FNIR(N, T, L+1) and Investigational FNIR(N, 0, R) under ageing



