A: Datasheet

Algorithm: microfocus_6

Developer: MicroFocus

Submission Date: 2018_10_29

Template size: 256 bytes

Template time (2.5 percentile): 224 msec

Template time (median): 263 msec

Template time (97.5 percentile): 312 msec

Investigation:

Frontal mugshot ranking 249 (out of 259) -- FNIR(1600000, 0, 1) = 0.4268 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 212 (out of 221) -- FNIR(1600000, 0, 1) = 0.5828 vs. lowest 0.0062 from sensetime_005

Immigration visa-border ranking 124 (out of 142) -- FNIR(1600000, 0, 1) = 0.4899 vs. lowest 0.0014 from visionlabs_009

Immigration visa-kiosk ranking 128 (out of 139) -- FNIR(1600000, 0, 1) = 0.7825 vs. lowest 0.0694 from cib_000

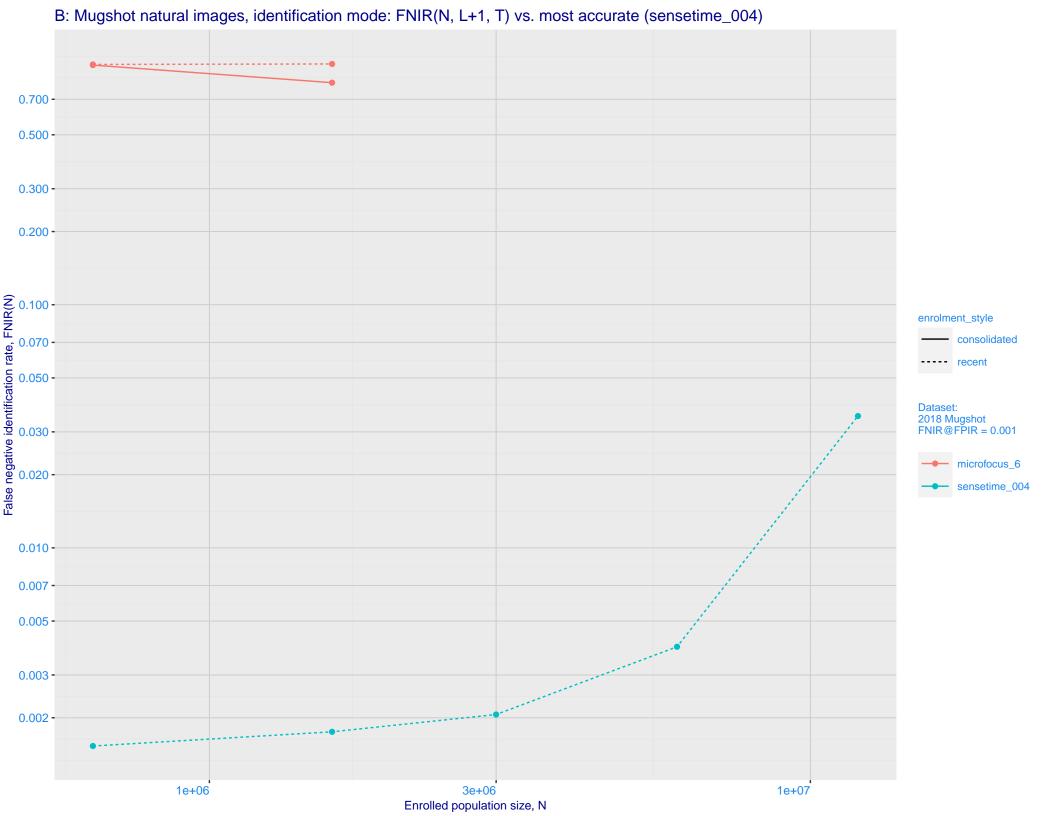
Identification:

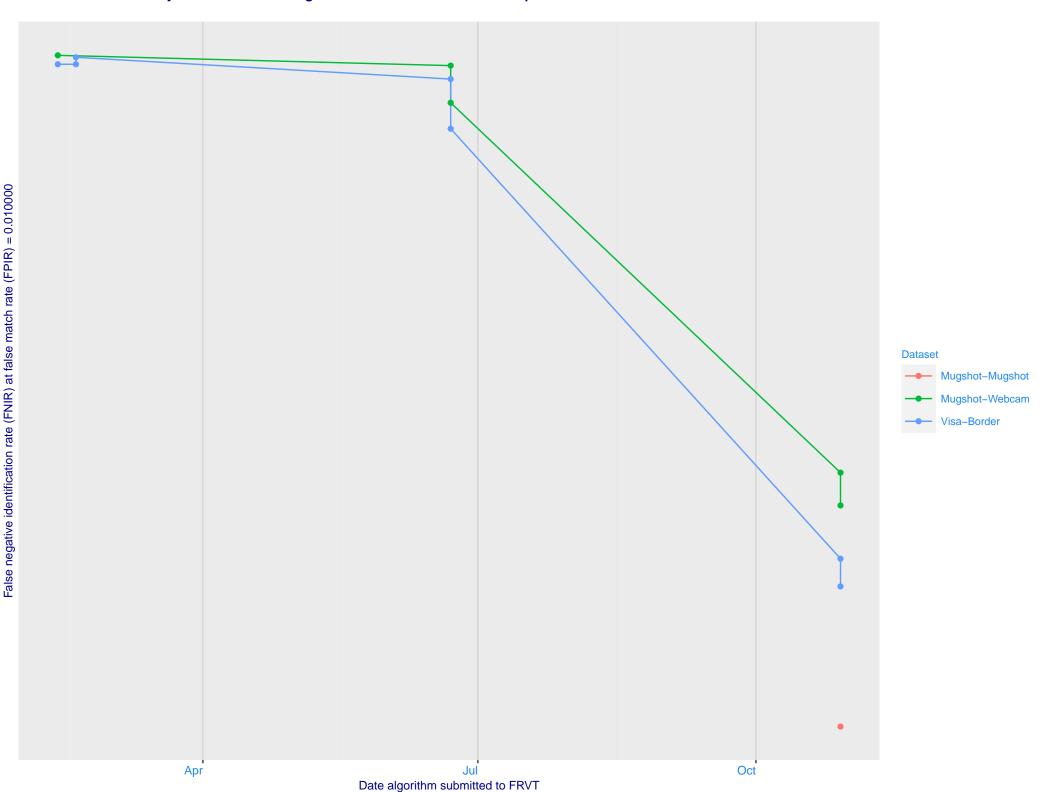
Frontal mugshot ranking 250 (out of 259) -- FNIR(1600000, T, L+1) = 0.9779, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 204 (out of 219) -- FNIR(1600000, T, L+1) = 0.9232, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Immigration visa-border ranking 118 (out of 139) -- FNIR(1600000, T, L+1) = 0.9235, FPIR=0.001000 vs. lowest 0.0059 from sensetime_004

Immigration visa-kiosk ranking 110 (out of 134) -- FNIR(1600000, T, L+1) = 0.9707, FPIR=0.001000 vs. lowest 0.1048 from sensetime_005

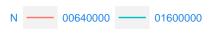


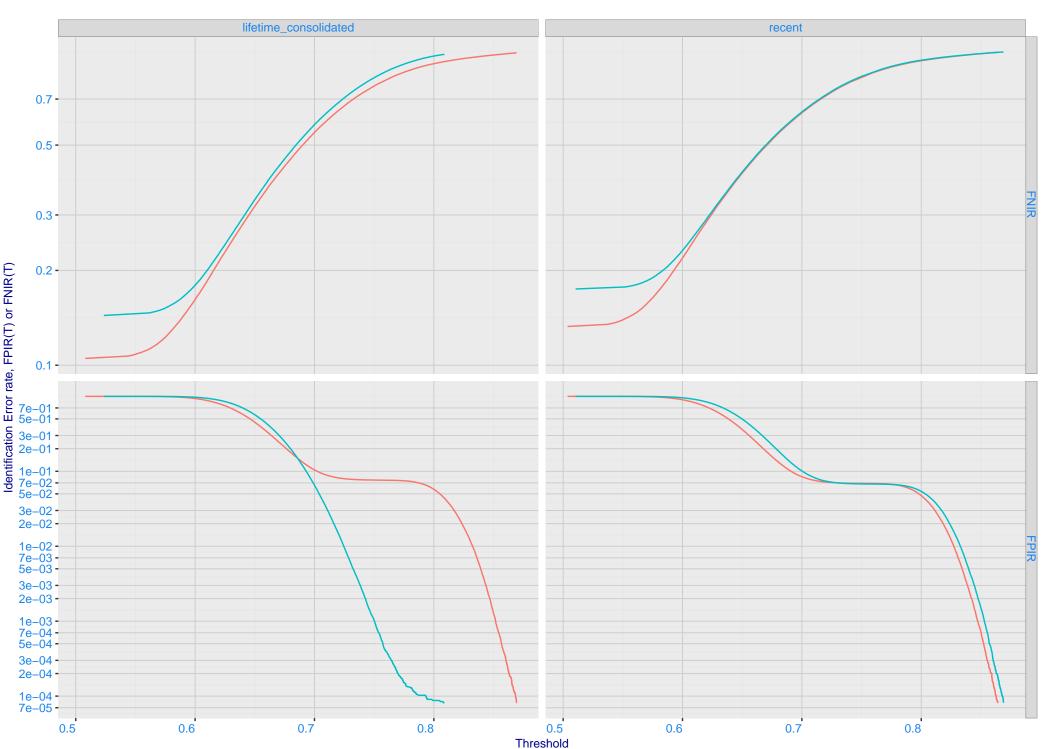


D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration Immigration** Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.500 - 0.300 - 0.200 enrolment_style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

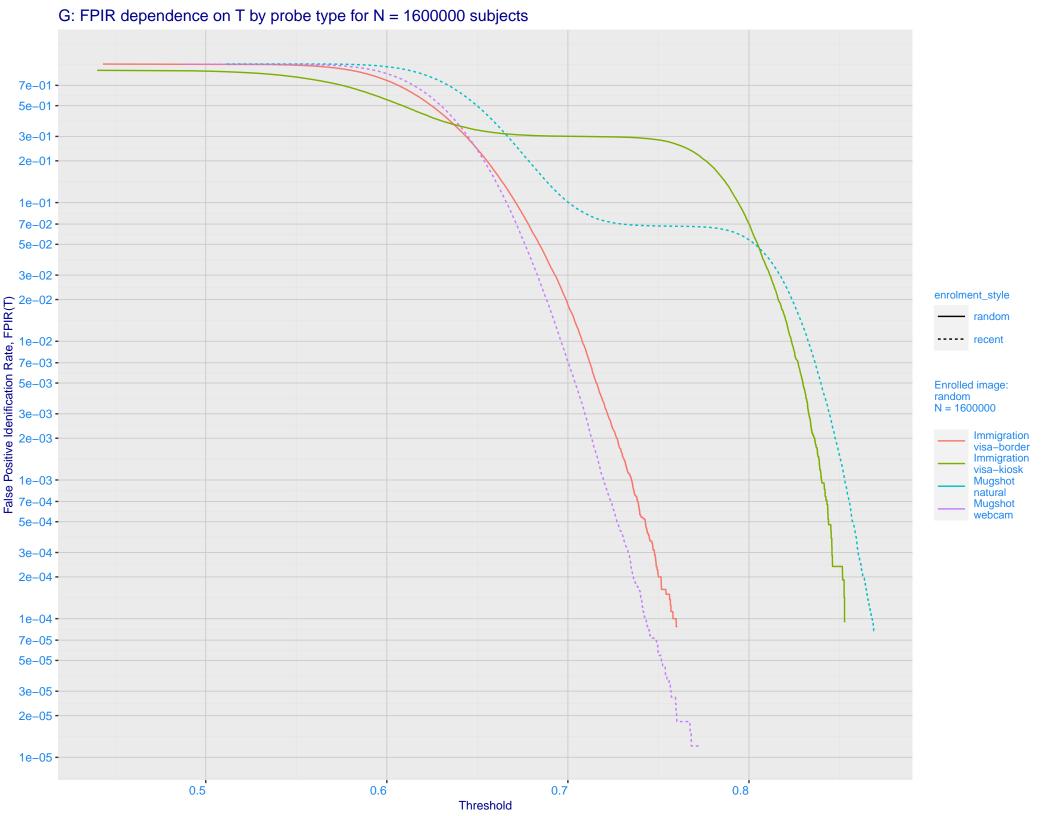
False positive identification rate, FPIR(T)

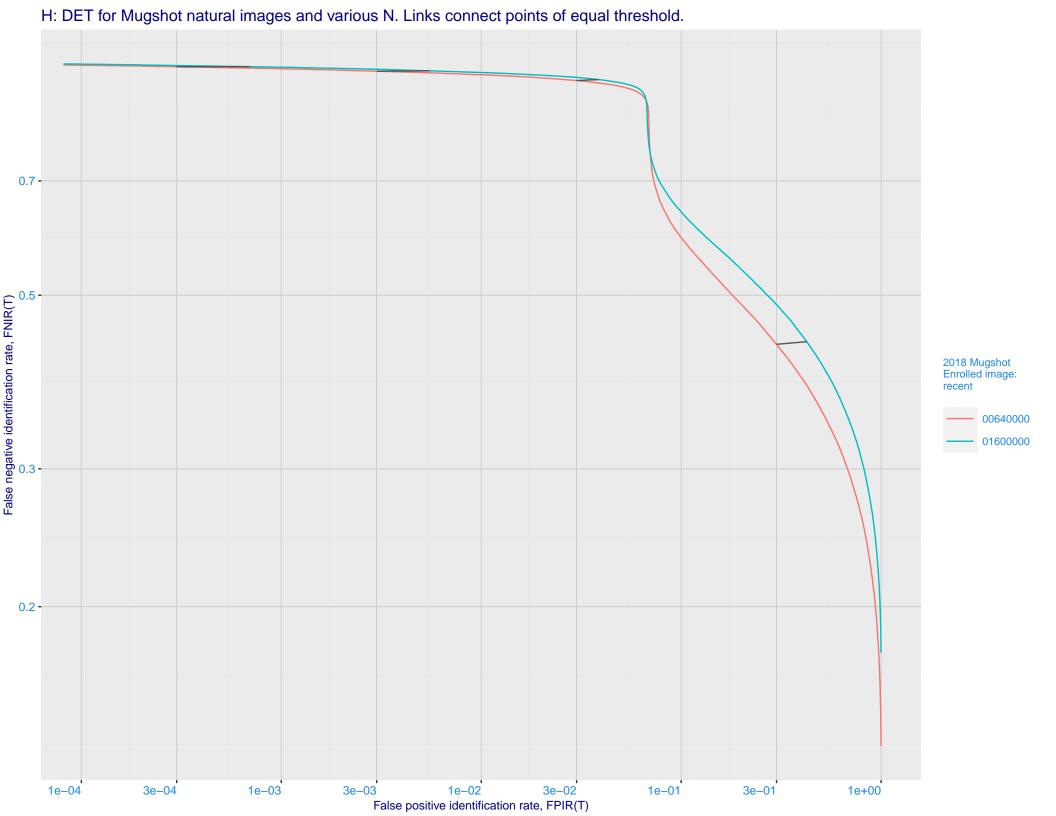
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images





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)

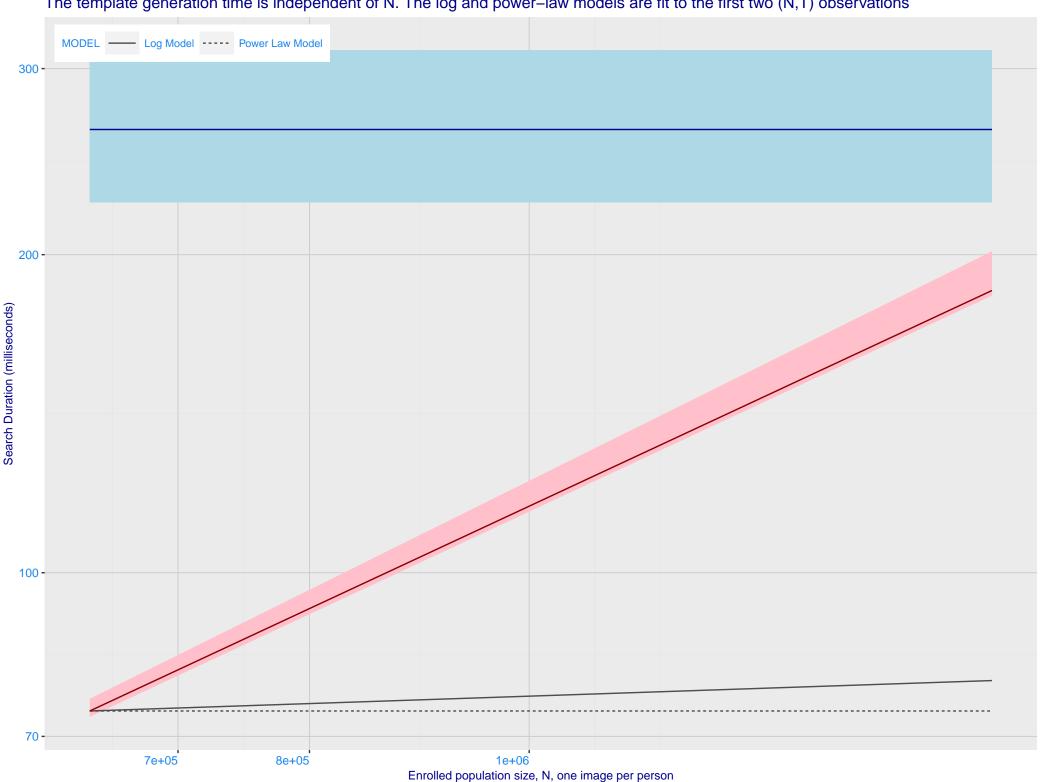




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 - 0.003 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.300 - 0.200 enrolment_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 microfocus_6 sensetime_005 0.100 -0.070 -0.050 -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 microfocus_6 sensetime_005 0.700 -0.500 -0.300 -0.200 -0.100 enrolment_style Ealse negative identification rate, FNIR(N) 0.000 - 0.000 - 0.000 - 0.010 - 0. lifetime_consolidated ---- random --- recent FNIR(R) N = 1600000 Immigration visa-border Immigration visa-kiosk Mugshot natural Mugshot webcam 0.007 -0.005 -0.003 -0.002 -0.001 -10 30 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



