A: Datasheet

Algorithm: microfocus_2

Developer: MicroFocus

Submission Date: 2018_02_16

Template size: 256 bytes

Template time (2.5 percentile): 420 msec

Template time (median): 532 msec

Template time (97.5 percentile): 636 msec

Investigation:

Frontal mugshot ranking 262 (out of 265) -- FNIR(1600000, 0, 1) = 0.6262 vs. lowest 0.0009 from sensetime_005

Immigration visa-border ranking 138 (out of 148) -- FNIR(1600000, 0, 1) = 0.7361 vs. lowest 0.0013 from visionlabs_010

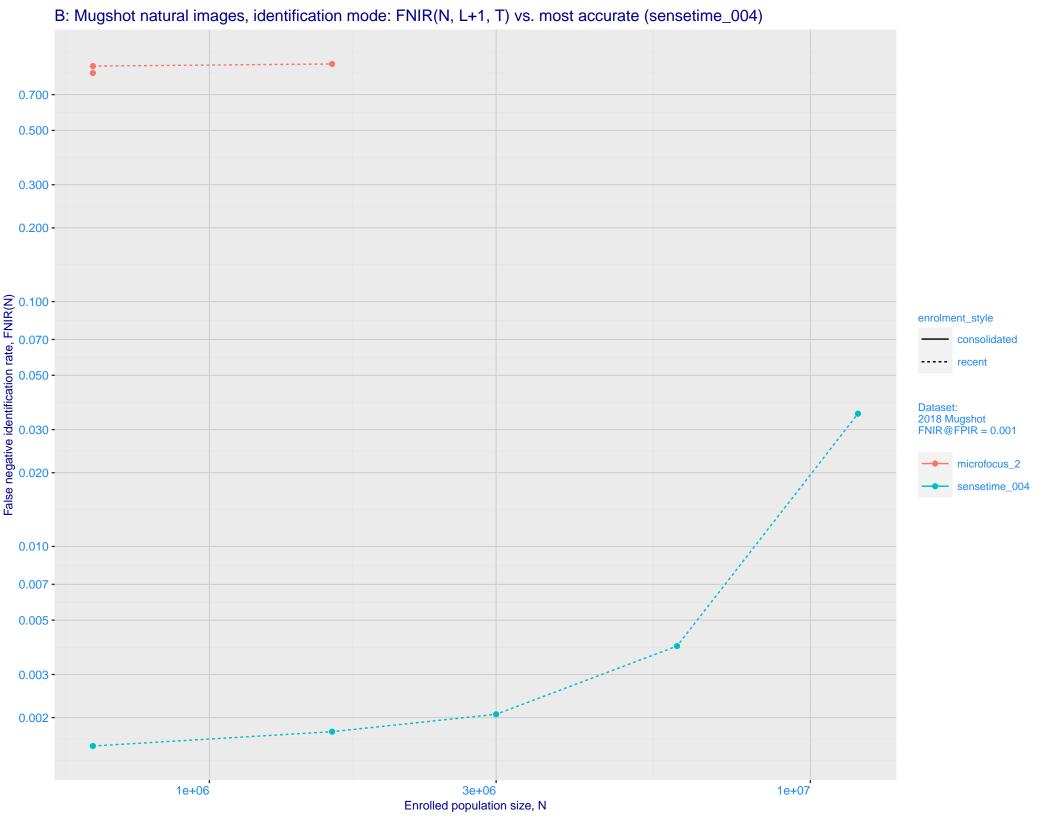
Immigration visa-kiosk ranking 140 (out of 145) -- FNIR(1600000, 0, 1) = 0.9189 vs. lowest 0.0568 from hr_000

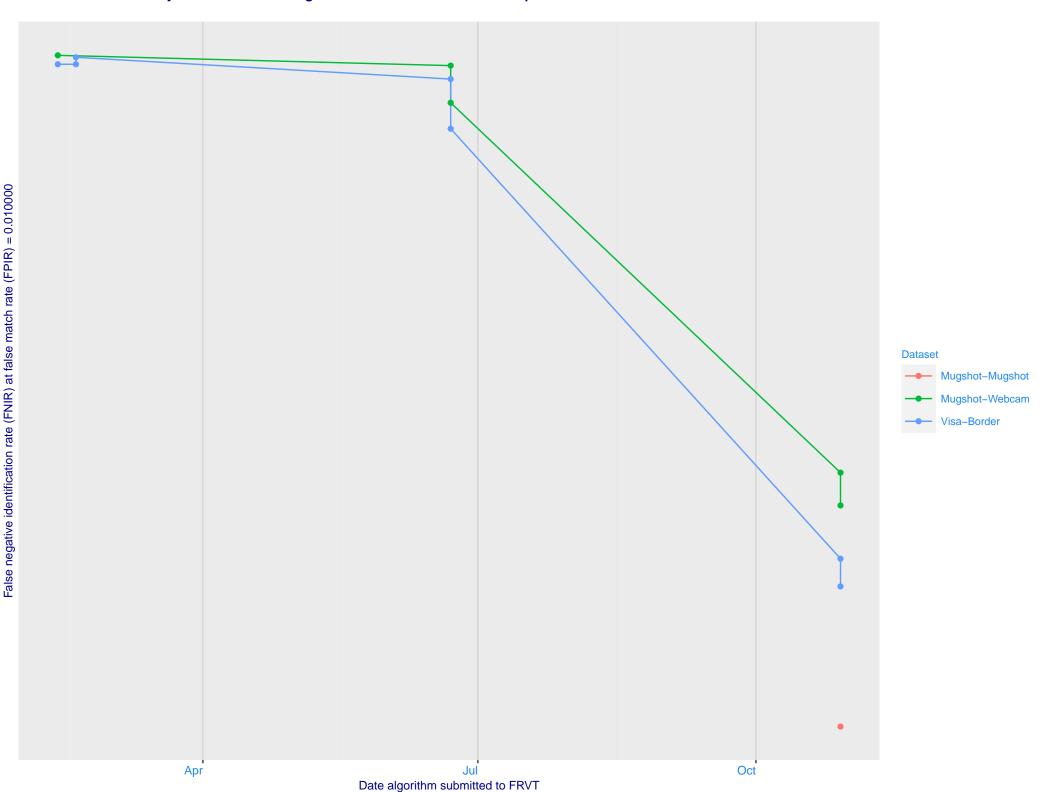
Identification:

Frontal mugshot ranking 253 (out of 265) -- FNIR(1600000, T, L+1) = 0.9339, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Immigration visa-border ranking 134 (out of 146) -- FNIR(1600000, T, L+1) = 0.9846, FPIR=0.001000 vs. lowest 0.0049 from hr_000

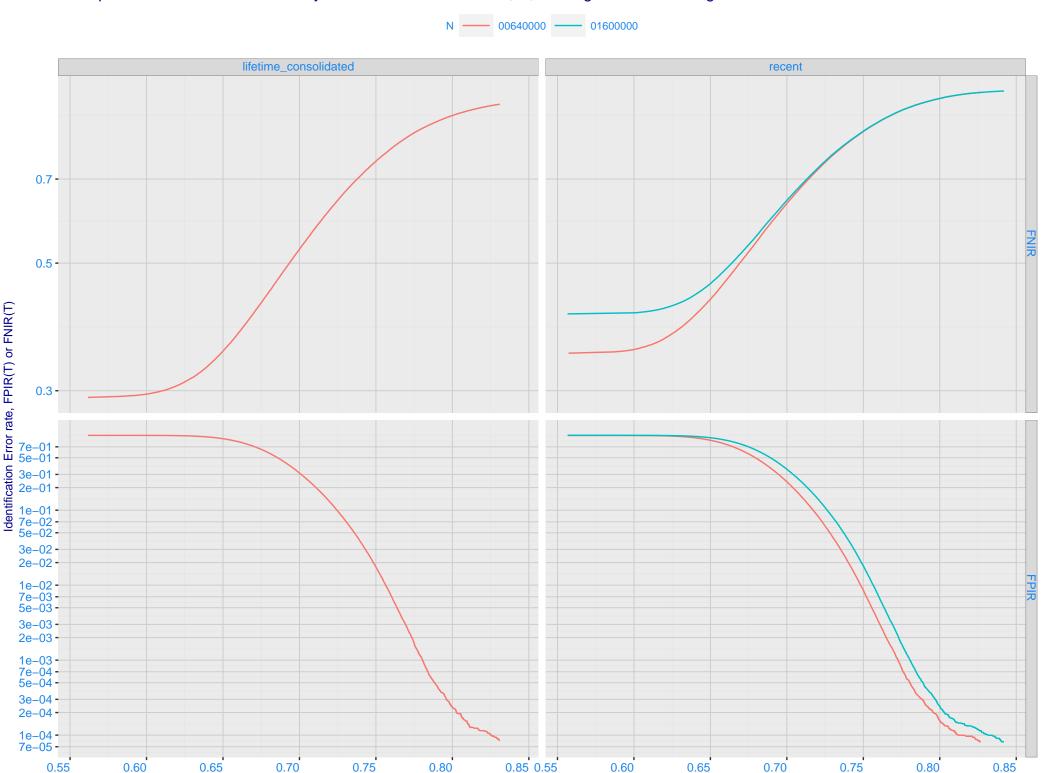
Immigration visa-kiosk ranking 119 (out of 141) -- FNIR(1600000, T, L+1) = 0.9834, FPIR=0.001000 vs. lowest 0.0996 from hr_000





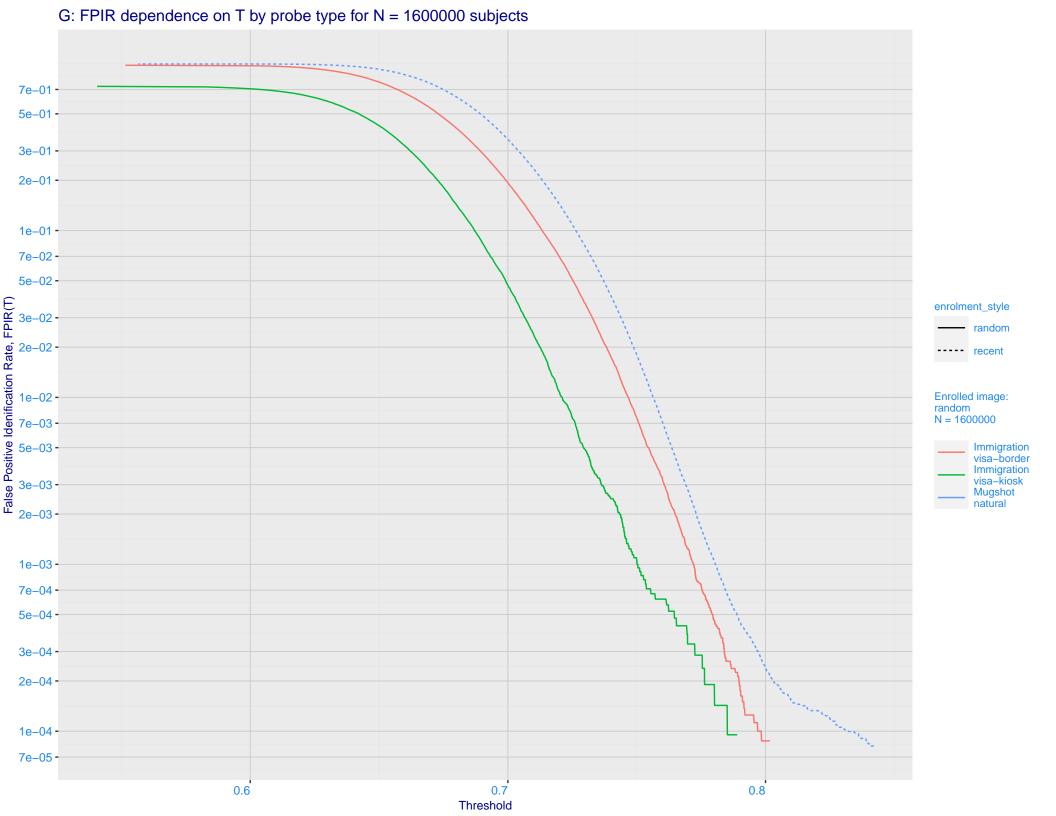
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.002 - 0.002 - 0.001 - 0.001 - 0.500 - 0.300 - 0.200 enrolment_style random-ONE-MATE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

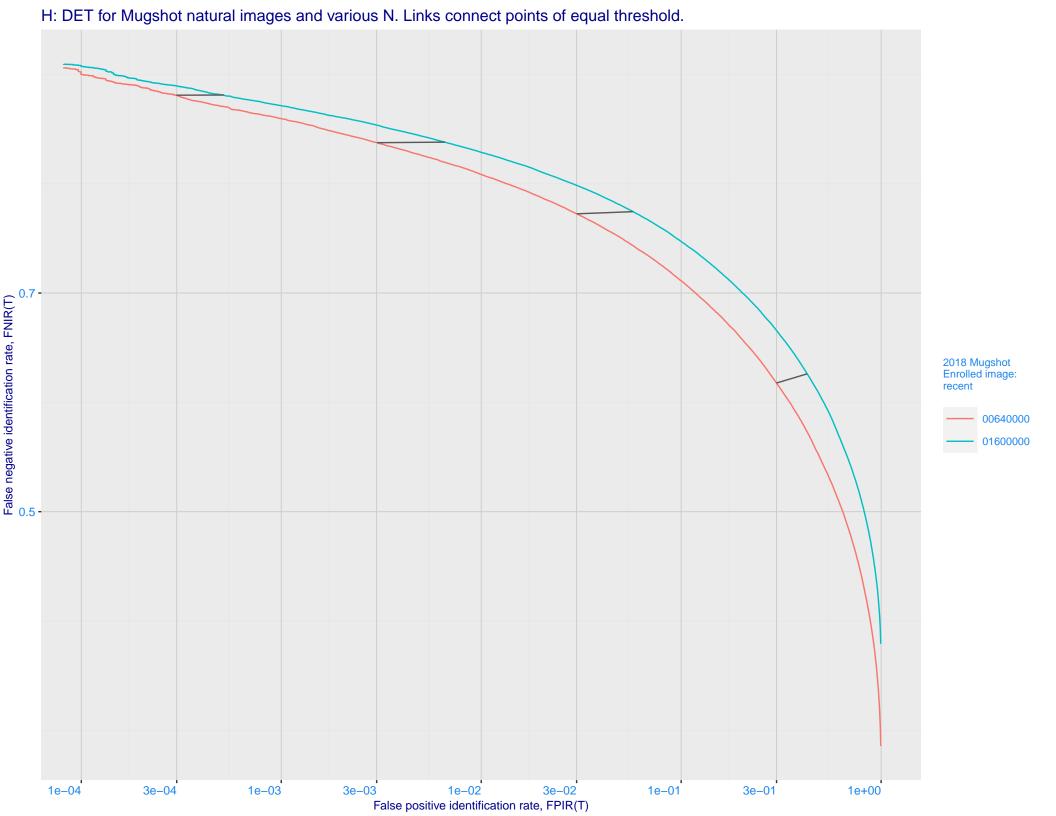
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



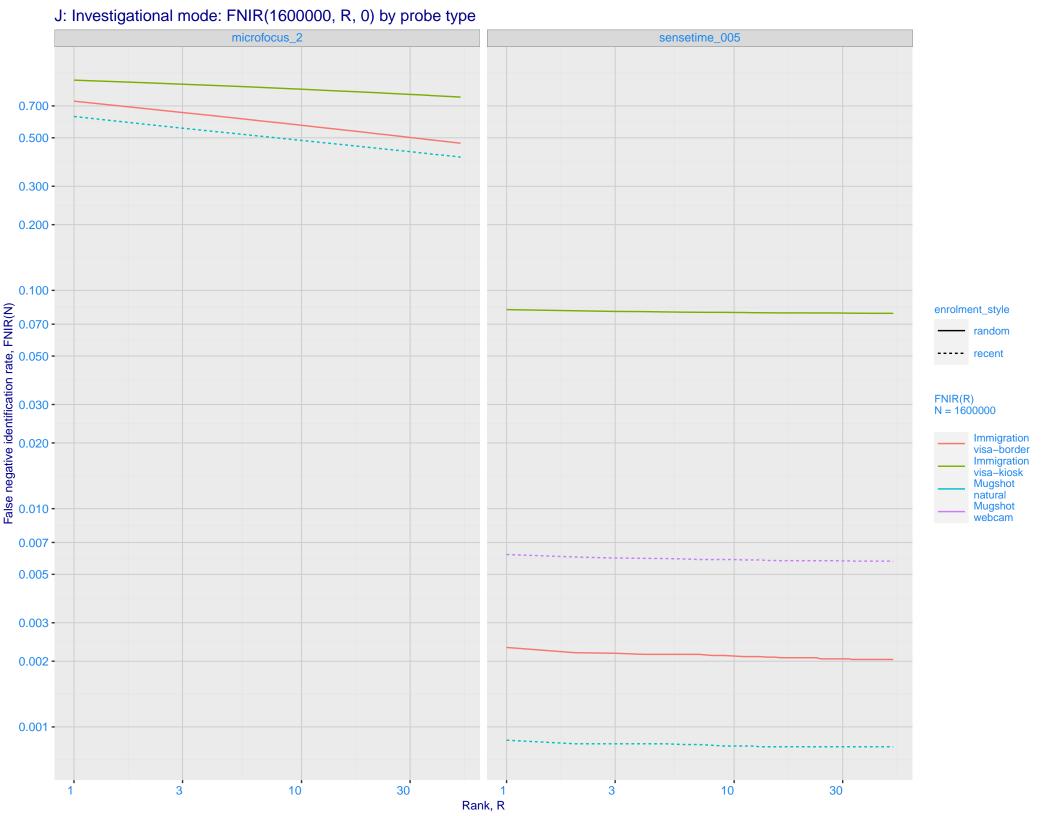
Threshold

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 -Selectivity, SEL(T) 3e-01 - 2e-01 - 1e-01 - 2e-01 - 2e Enrolled images: recent N = 1600000 Mugshot natural 7e-02 -5e-02 -3e-02 -2e-02 -1e-02 -7e-03 -5e-03 -3e-03 -2e-03 -1e-03 -7e-04 **-**5e-04 -1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)

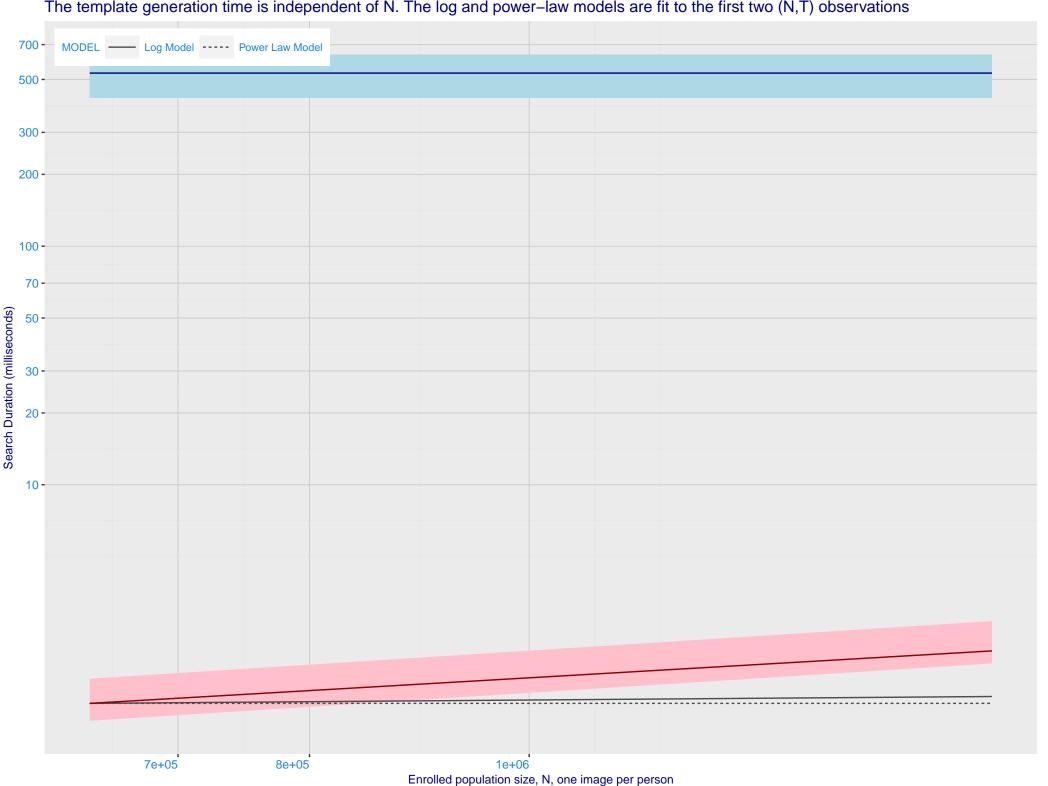




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 - 0.003 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.300 - 0.200 enrolment_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 microfocus_2 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



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



