## 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 276 (out of 279) -- FNIR(1600000, 0, 1) = 0.6262 vs. lowest 0.0009 from sensetime\_005

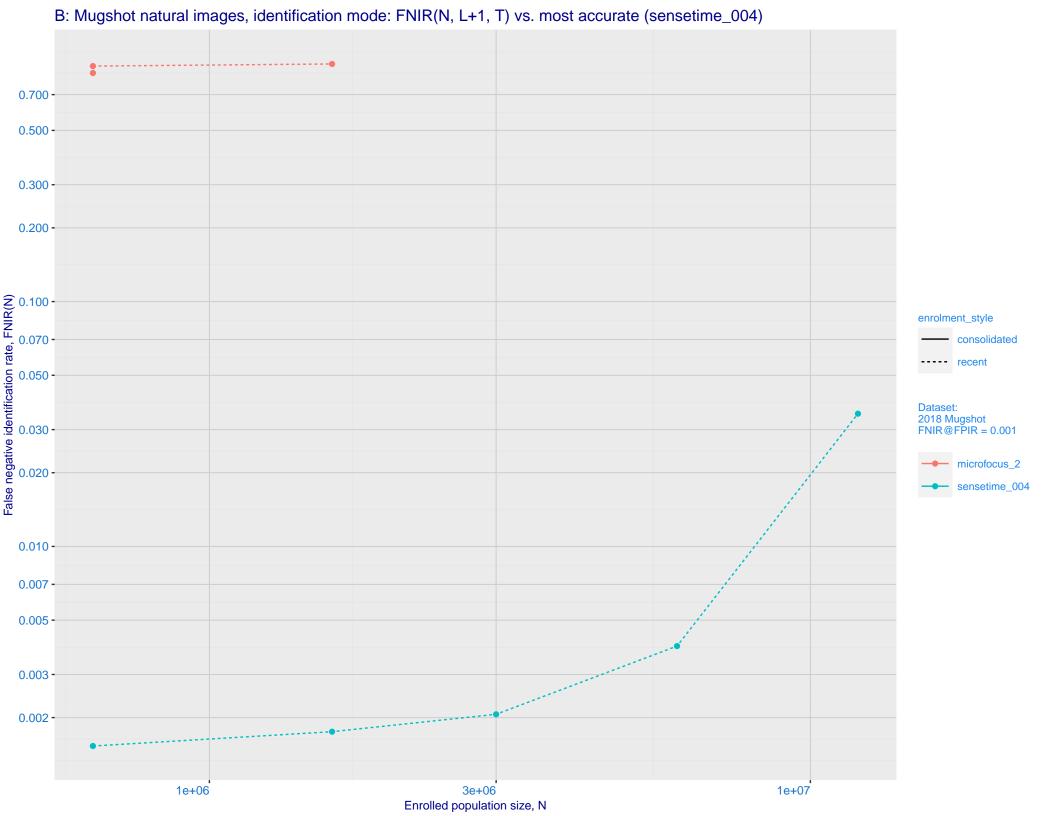
Immigration visa-border ranking 158 (out of 168) -- FNIR(1600000, 0, 1) = 0.7361 vs. lowest 0.0013 from visionlabs\_010

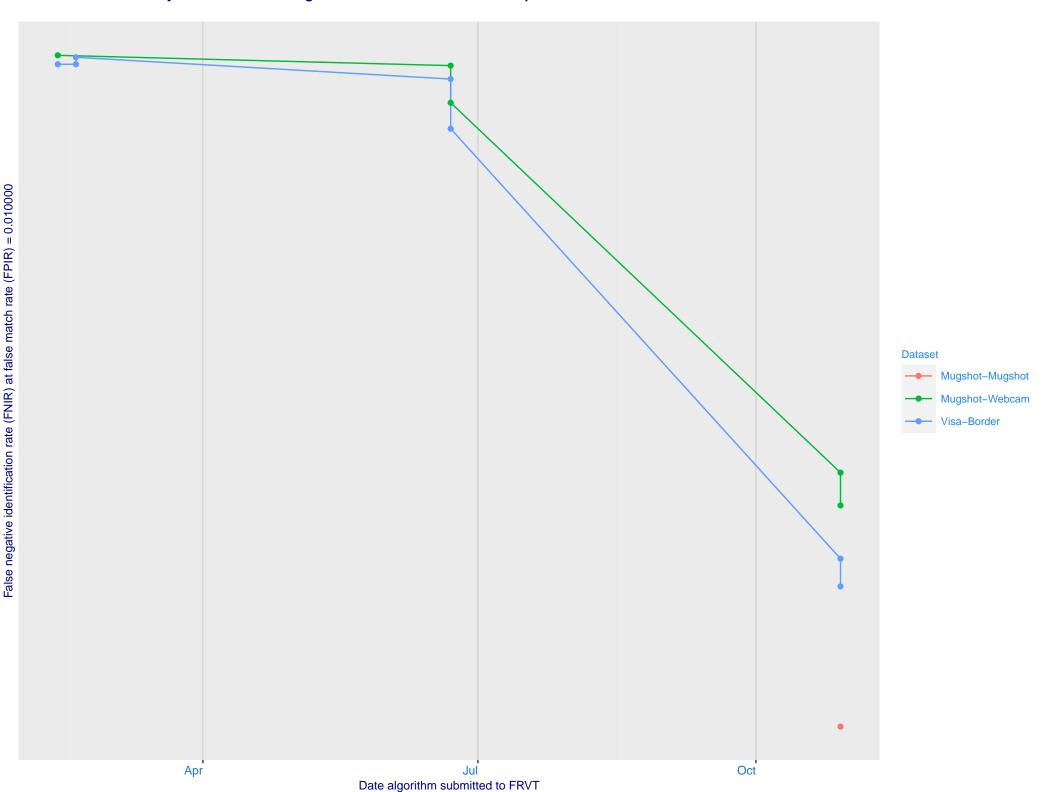
Immigration visa-kiosk ranking 160 (out of 165) -- FNIR(1600000, 0, 1) = 0.9189 vs. lowest 0.0568 from cloudwalk\_hr\_000

Identification:

Frontal mugshot ranking 266 (out of 279) -- FNIR(1600000, T, L+1) = 0.9339, FPIR=0.001000 vs. lowest 0.0018 from sensetime\_004

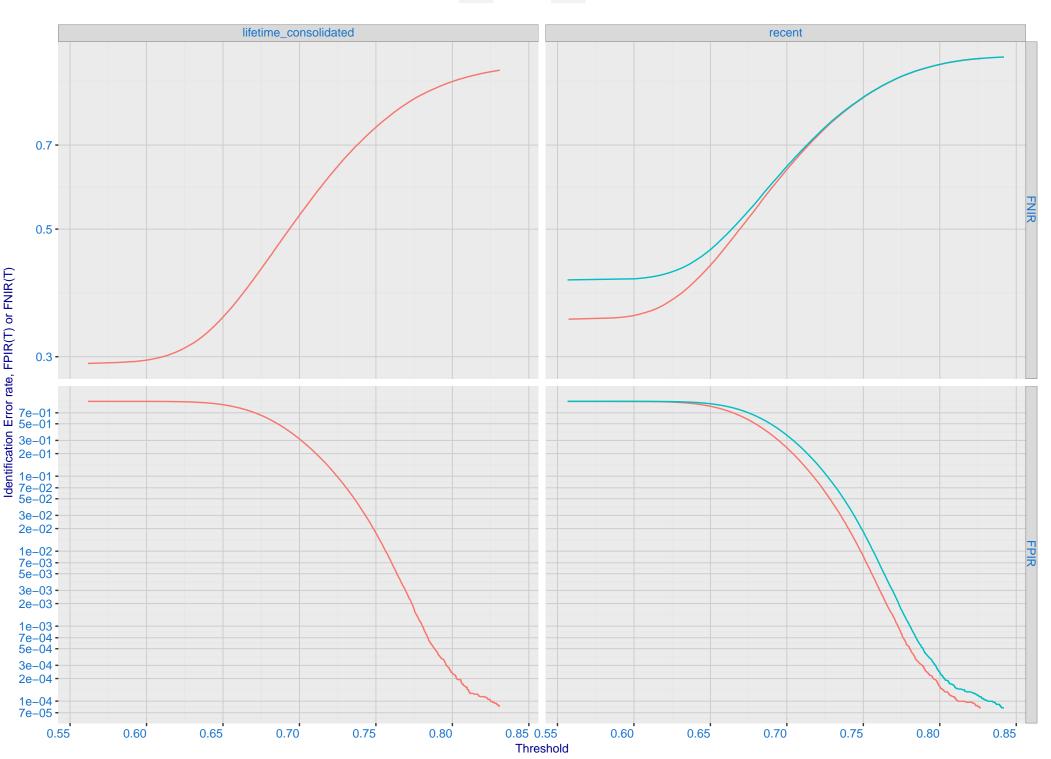
Immigration visa-border ranking 154 (out of 167) -- FNIR(1600000, T, L+1) = 0.9846, FPIR=0.001000 vs. lowest 0.0047 from idemia\_008



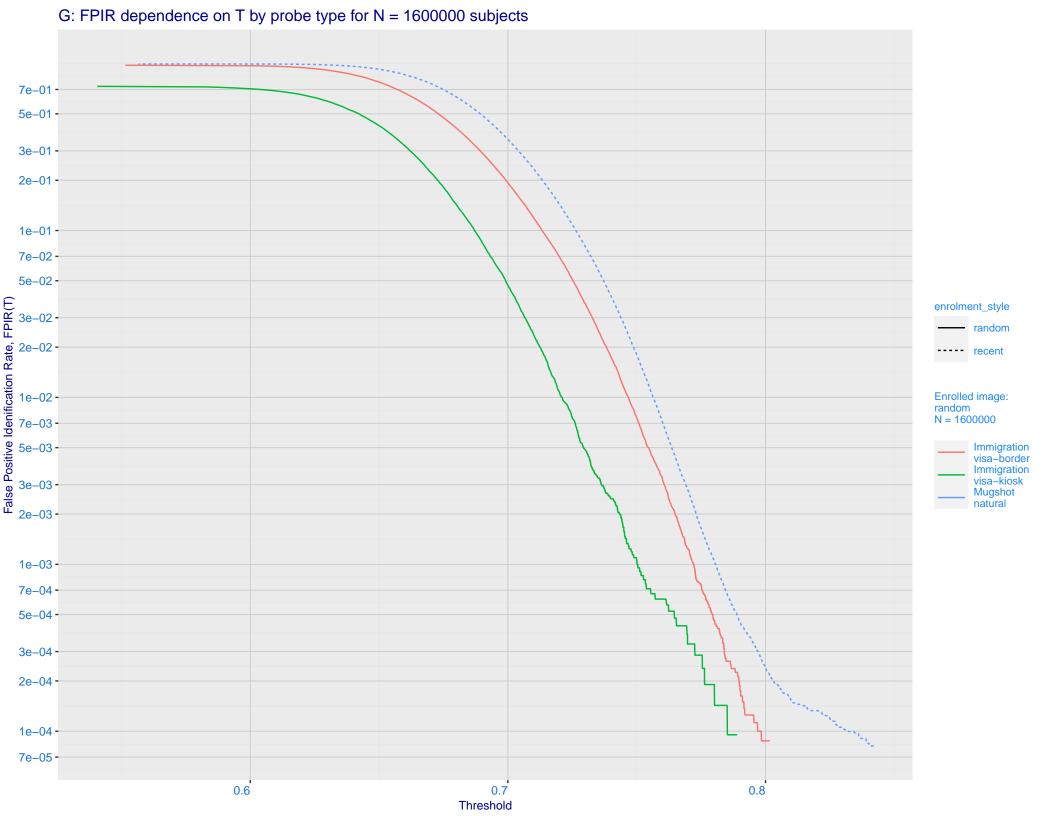


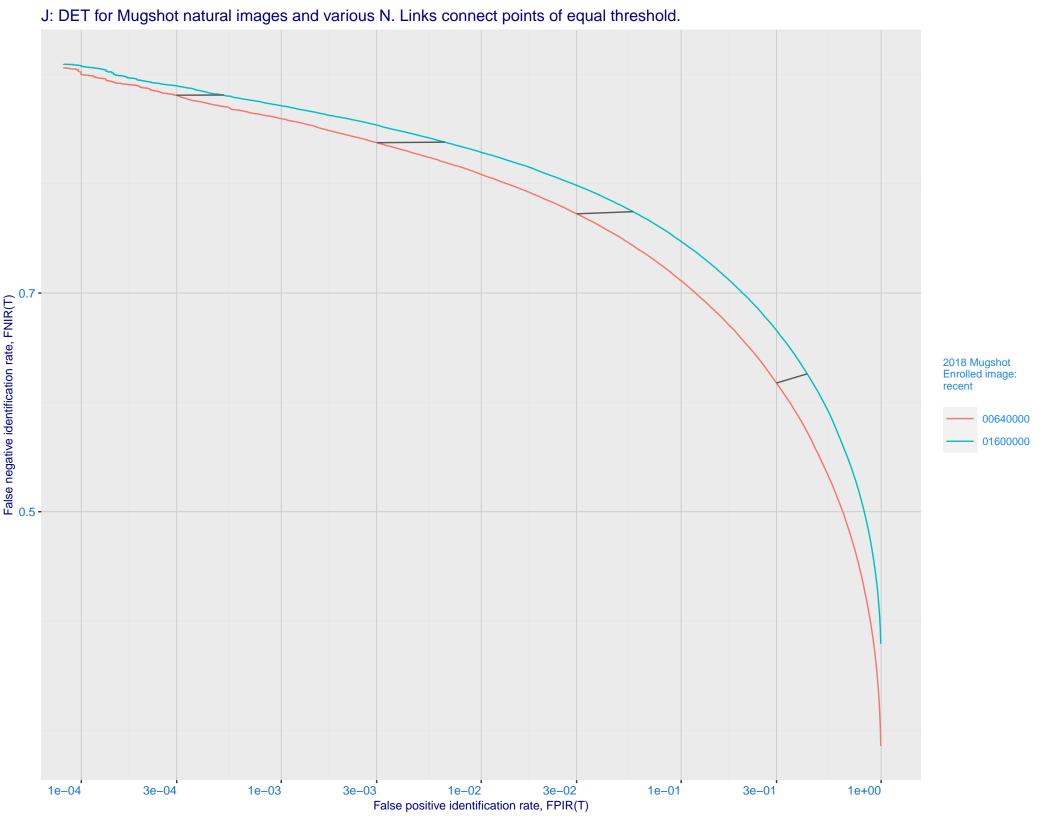
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment\_style random-ONE-MATE recent-ONE-MATE 0.100 -0.070 sensetime 004 0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -False positive identification rate, FPIR(T)



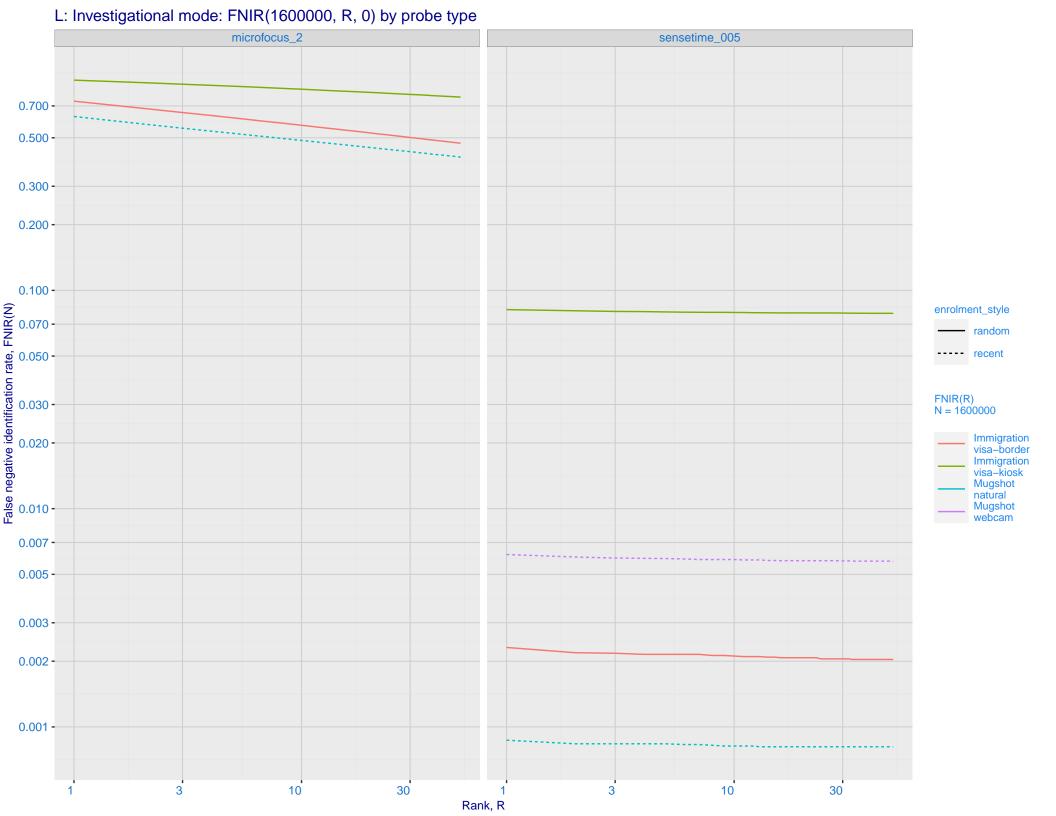


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -Selectivity, SEL(T) 3e-01 - 2e-01 - 1e-01 - 2e-01 - 2e Enrolled images: recent N = 1600000 Mugshot natural 7e-02 -5e-02 -3e-02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

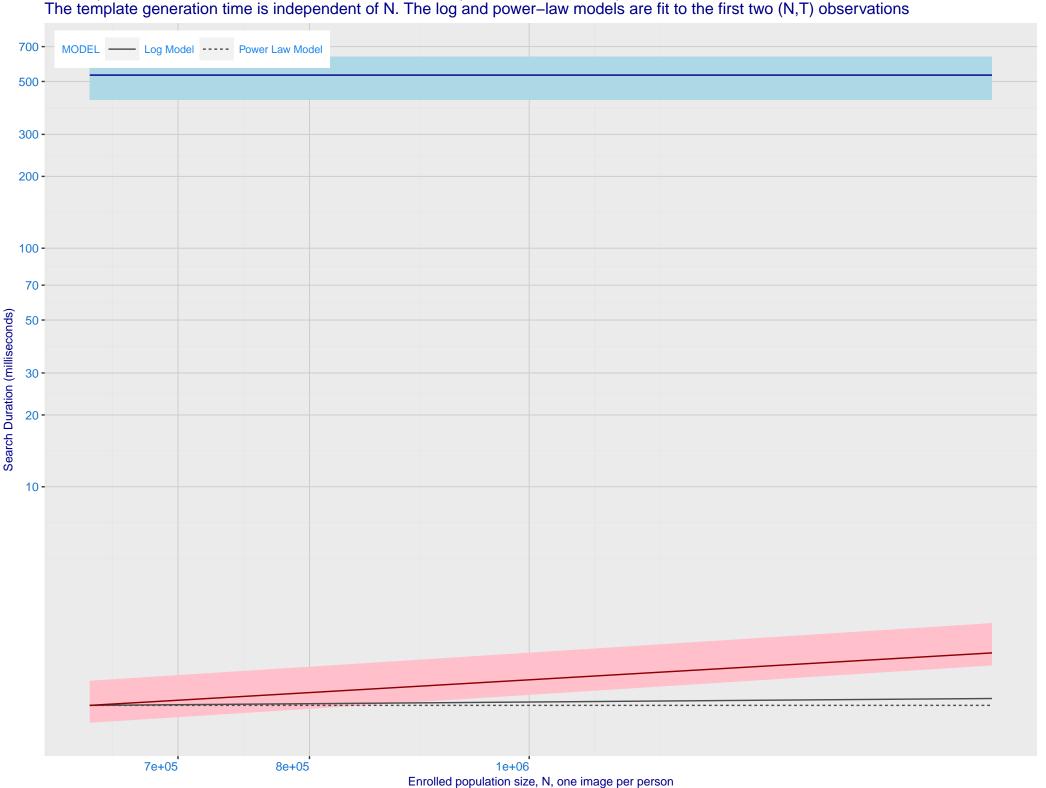




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime\_005) Immigration **Immigration** visa-border visa-kiosk 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 - 0.003 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.300 - 0.200 enrolment\_style consolidated ---- random --- recent Mugshot webcam Mugshot 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



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



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



