A: Datasheet

Algorithm: innovatrics_0

Developer: Innovatrics

Submission Date: 2018_02_16

Template size: 530 bytes

Template time (2.5 percentile): 303 msec

Template time (median): 513 msec

Template time (97.5 percentile): 555 msec

Investigation:

Frontal mugshot ranking 190 (out of 265) -- FNIR(1600000, 0, 1) = 0.0395 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 169 (out of 227) -- FNIR(1600000, 0, 1) = 0.0763 vs. lowest 0.0062 from sensetime_005

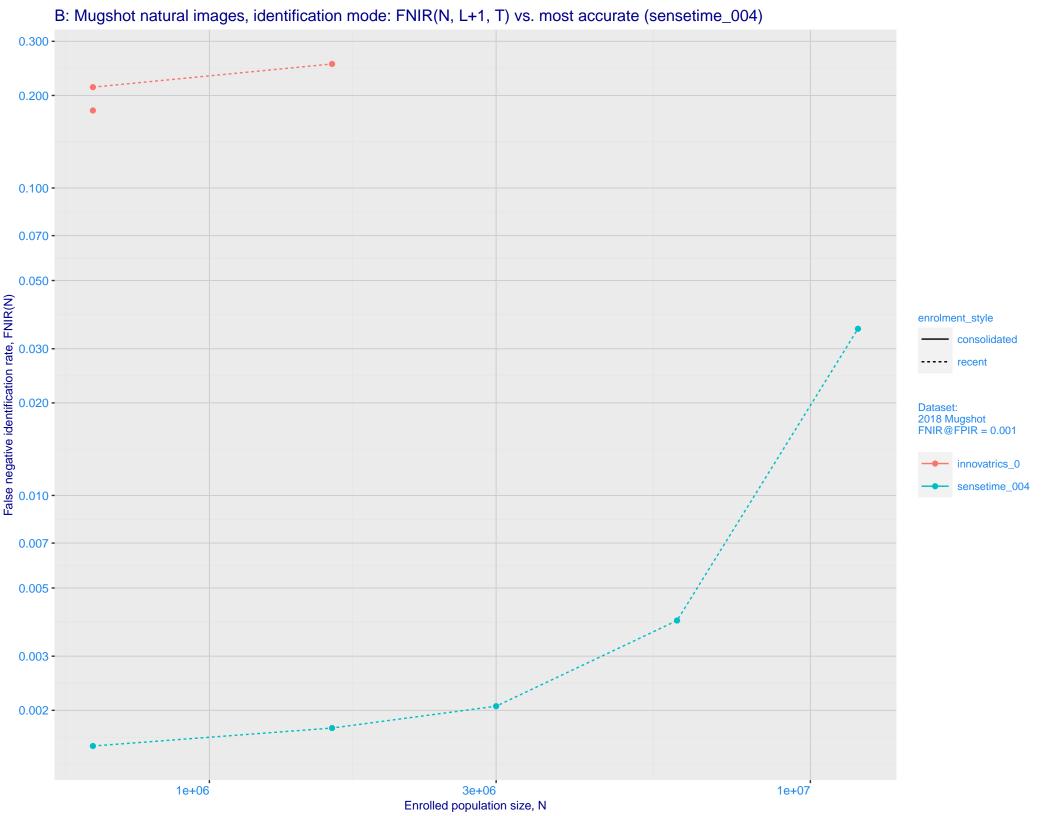
Mugshot profile ranking 156 (out of 196) -- FNIR(1600000, 0, 1) = 0.9644 vs. lowest 0.0591 from sensetime_005

Identification:

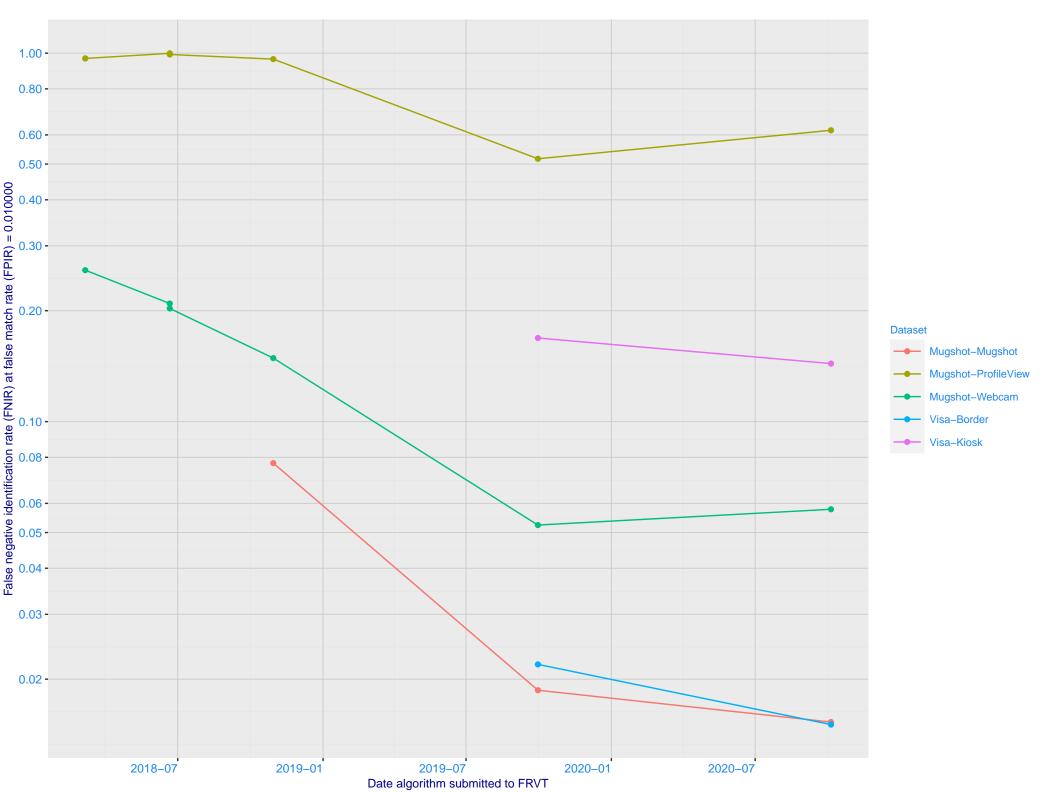
Frontal mugshot ranking 186 (out of 265) -- FNIR(1600000, T, L+1) = 0.2532, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 168 (out of 225) -- FNIR(1600000, T, L+1) = 0.3605, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 64 (out of 195) -- FNIR(1600000, T, L+1) = 0.9828, FPIR=0.001000 vs. lowest 0.1331 from hr_000



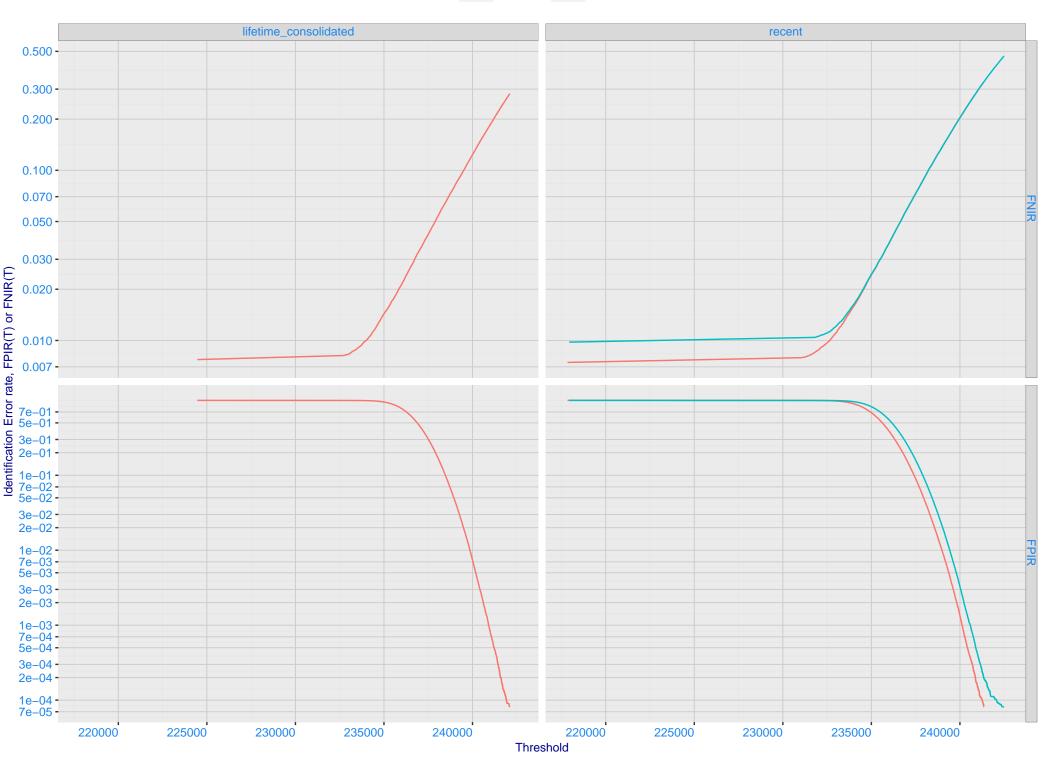
C: Evolution of accuracy for INNOVATRICS algorithms on three datasets 2018 – present



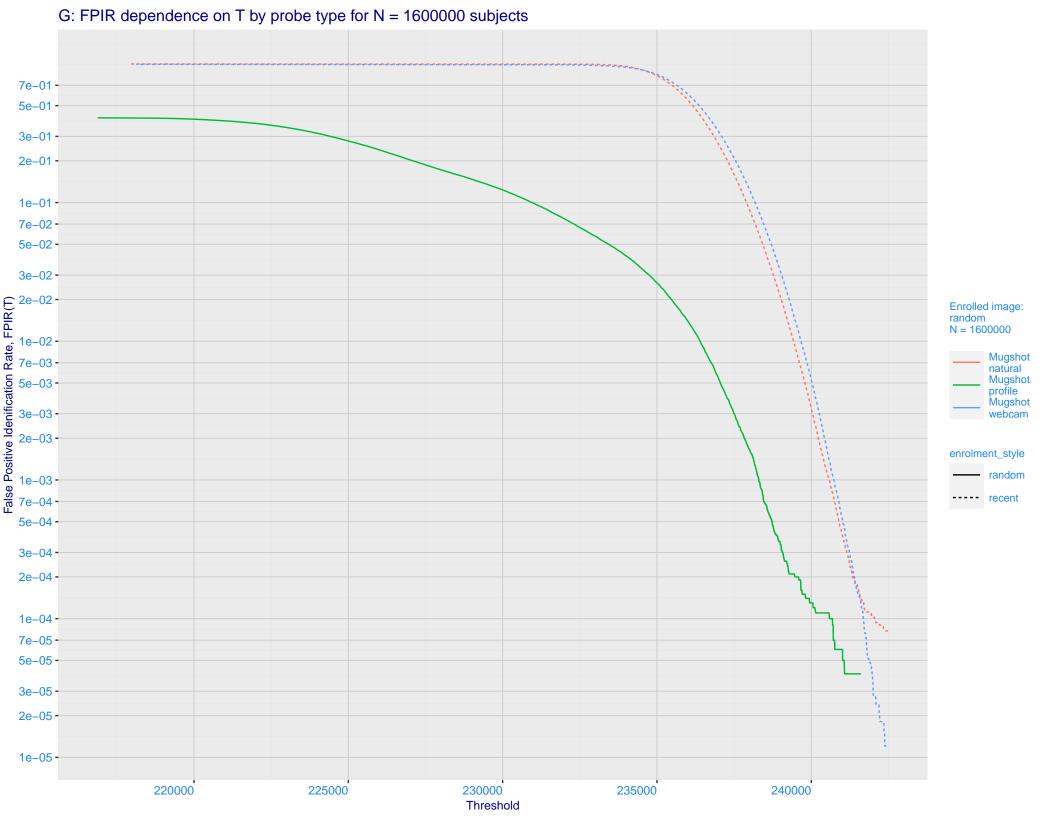
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.0001 - 0.700 - 0.500 - 0.200 - 0.100 - 0 enrolment_style random-ONE-MATE recent-ONE-MATE 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -

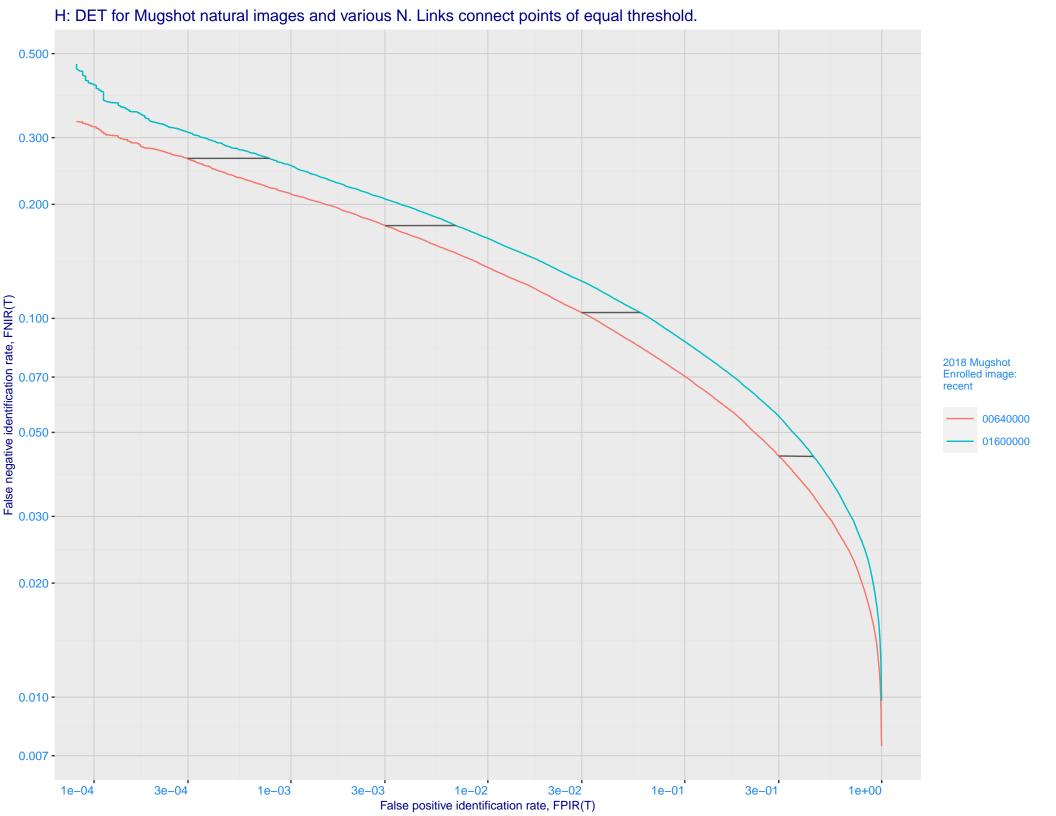
False positive identification rate, FPIR(T)



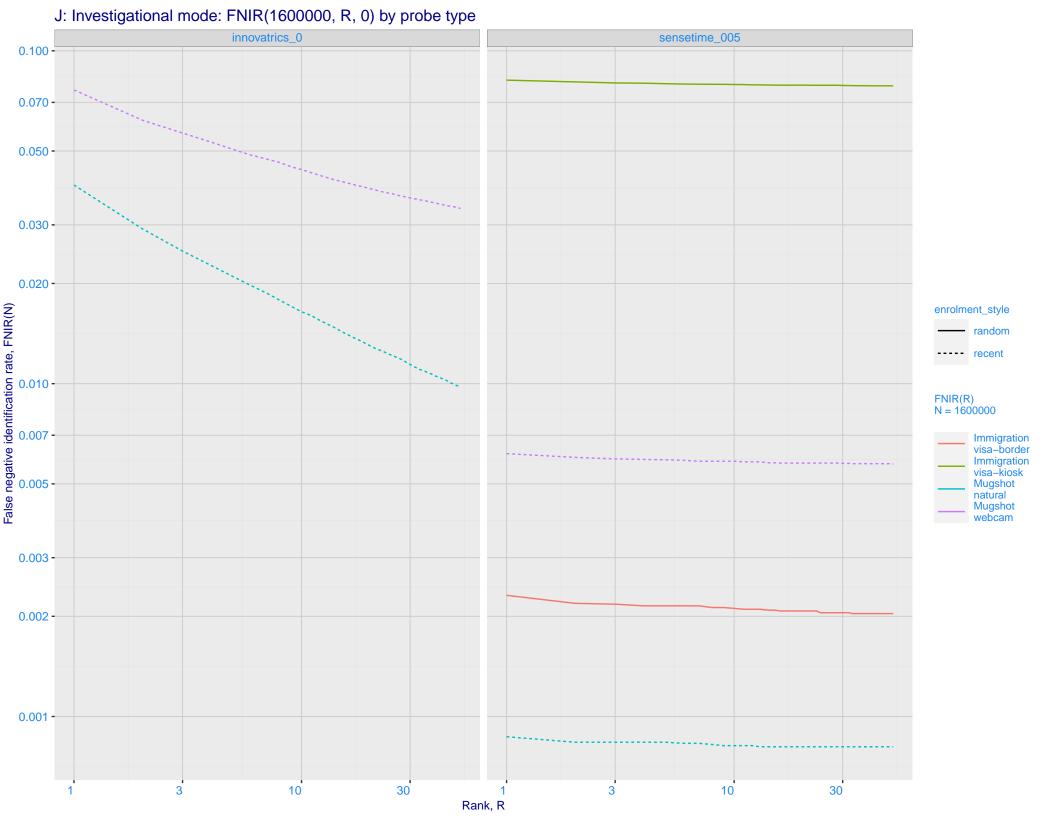


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 -5e-02 -3e-02 -3e-02 -1e-02 -**Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam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

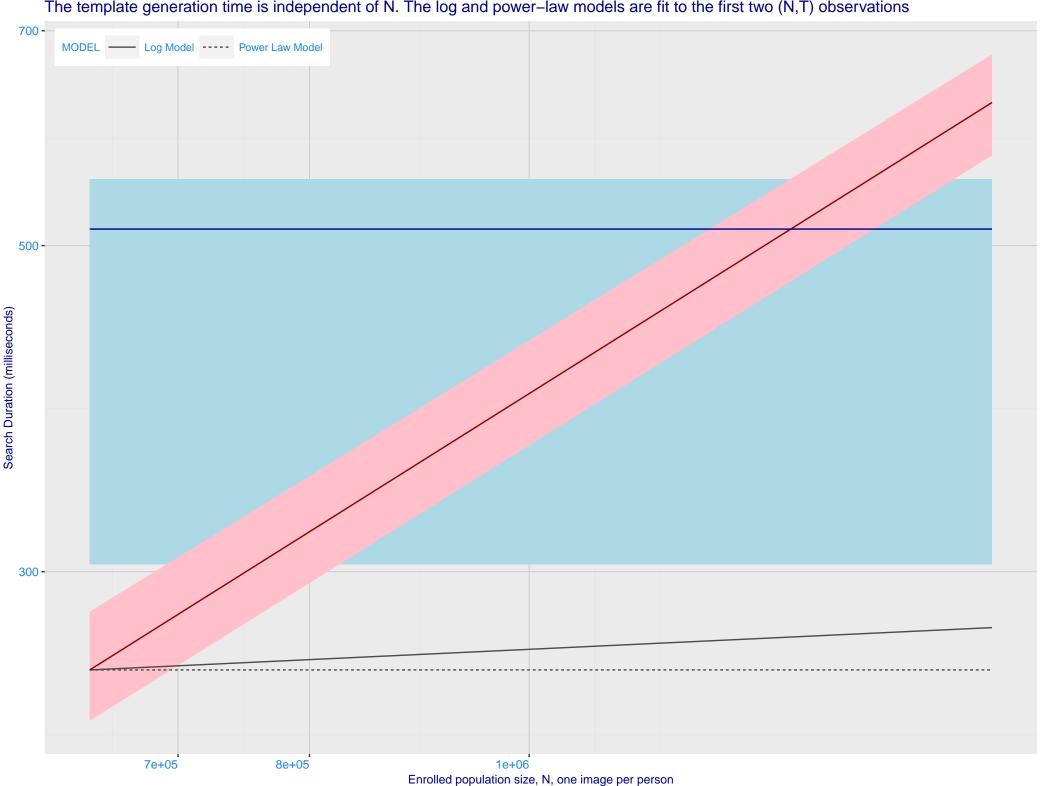




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Ealse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.030 - 0. enrolment_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 innovatrics_0 - sensetime_005 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



