A: Datasheet

Algorithm: ntechlab_0

Developer: N-Tech Lab

Submission Date: 2018_02_16

Template size: 4441 bytes

Template time (2.5 percentile): 711 msec

Template time (median): 729 msec

Template time (97.5 percentile): 760 msec

Investigation:

Frontal mugshot ranking 124 (out of 265) -- FNIR(1600000, 0, 1) = 0.0094 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 112 (out of 227) -- FNIR(1600000, 0, 1) = 0.0310 vs. lowest 0.0062 from sensetime_005

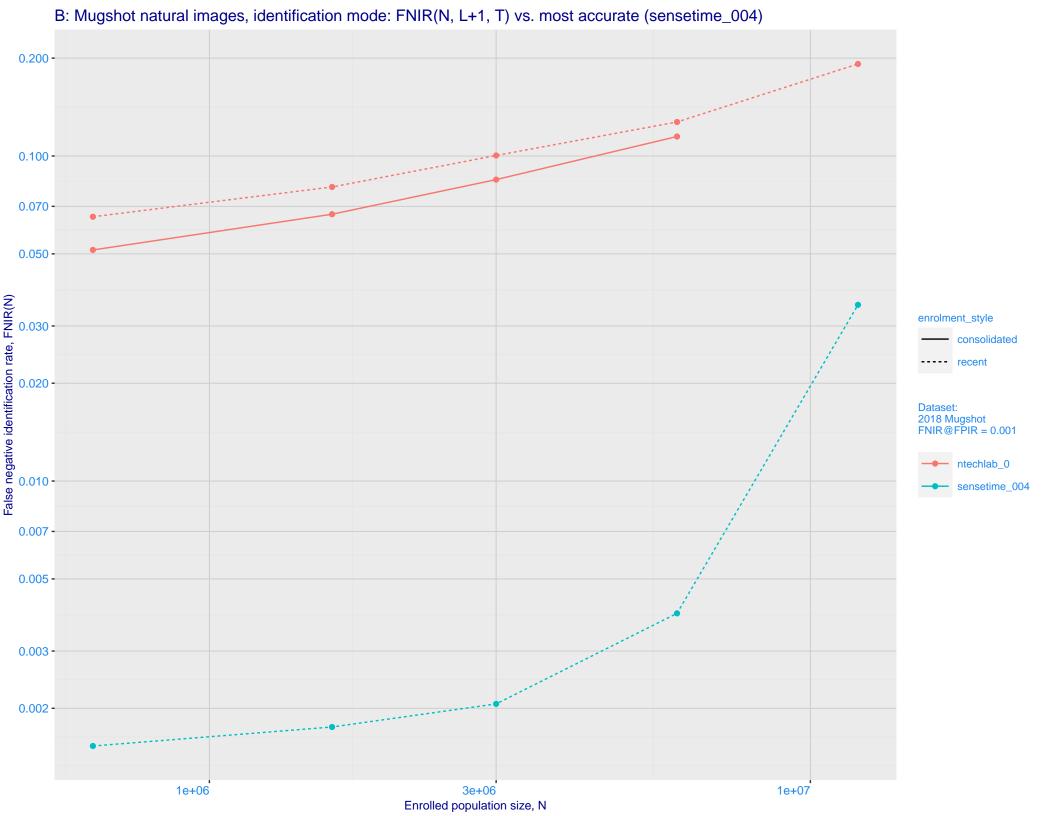
Mugshot profile ranking 63 (out of 196) -- FNIR(1600000, 0, 1) = 0.5950 vs. lowest 0.0591 from sensetime_005

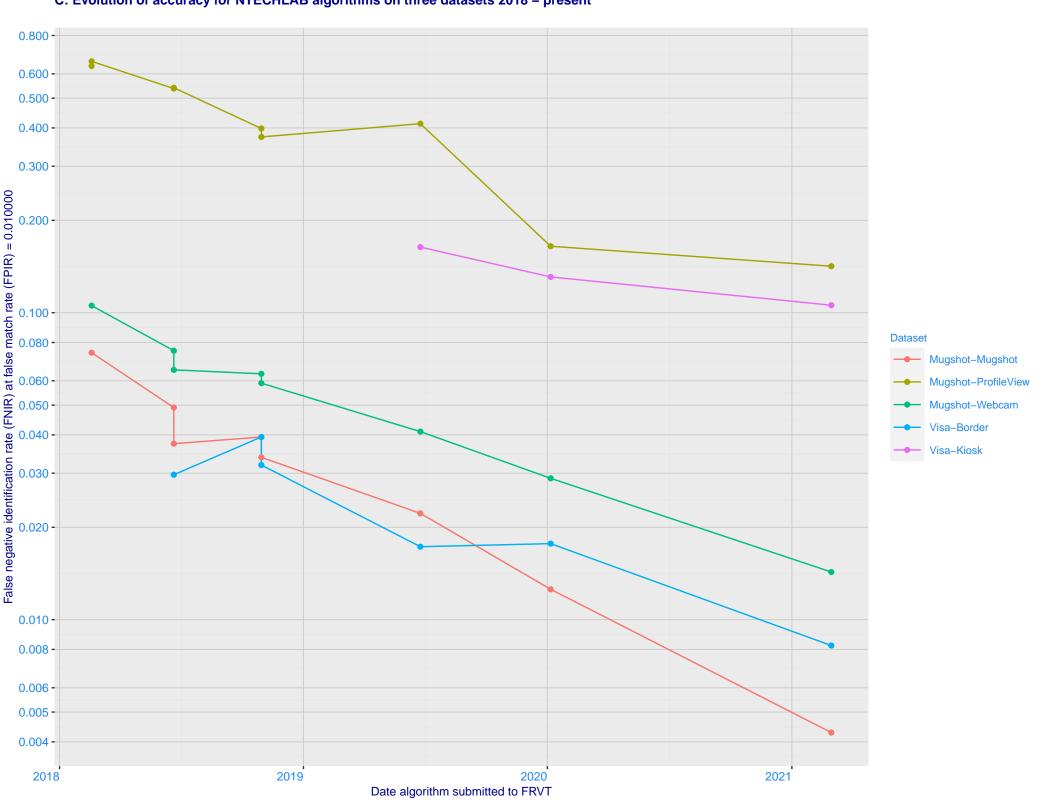
Identification:

Frontal mugshot ranking 117 (out of 265) -- FNIR(1600000, T, L+1) = 0.0803, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 115 (out of 225) -- FNIR(1600000, T, L+1) = 0.1616, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 32 (out of 195) -- FNIR(1600000, T, L+1) = 0.9003, FPIR=0.001000 vs. lowest 0.1331 from hr_000

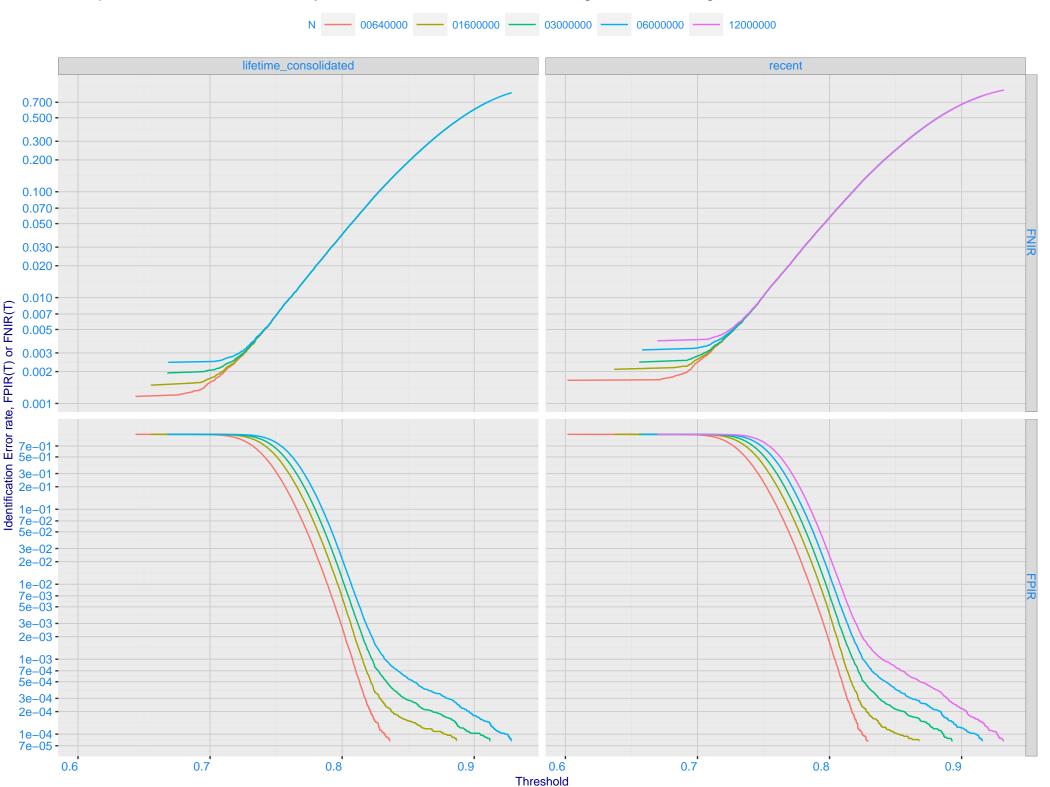




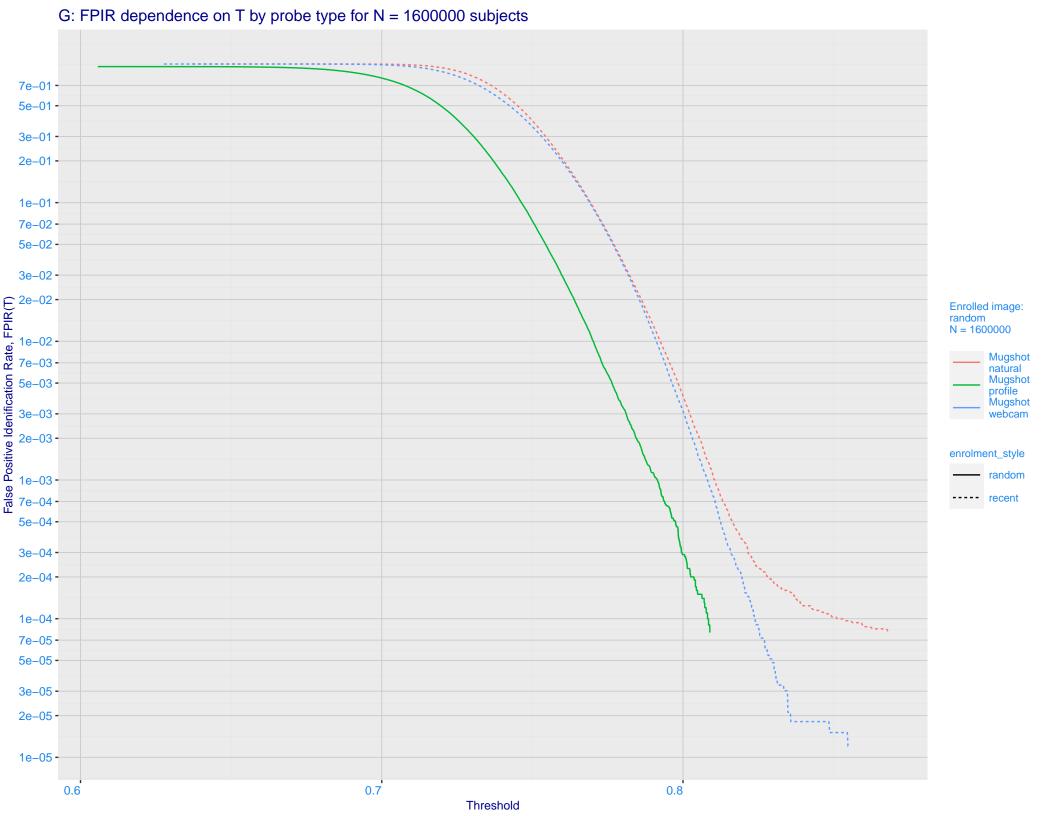
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.0001 - 0.700 - 0.500 - 0.200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

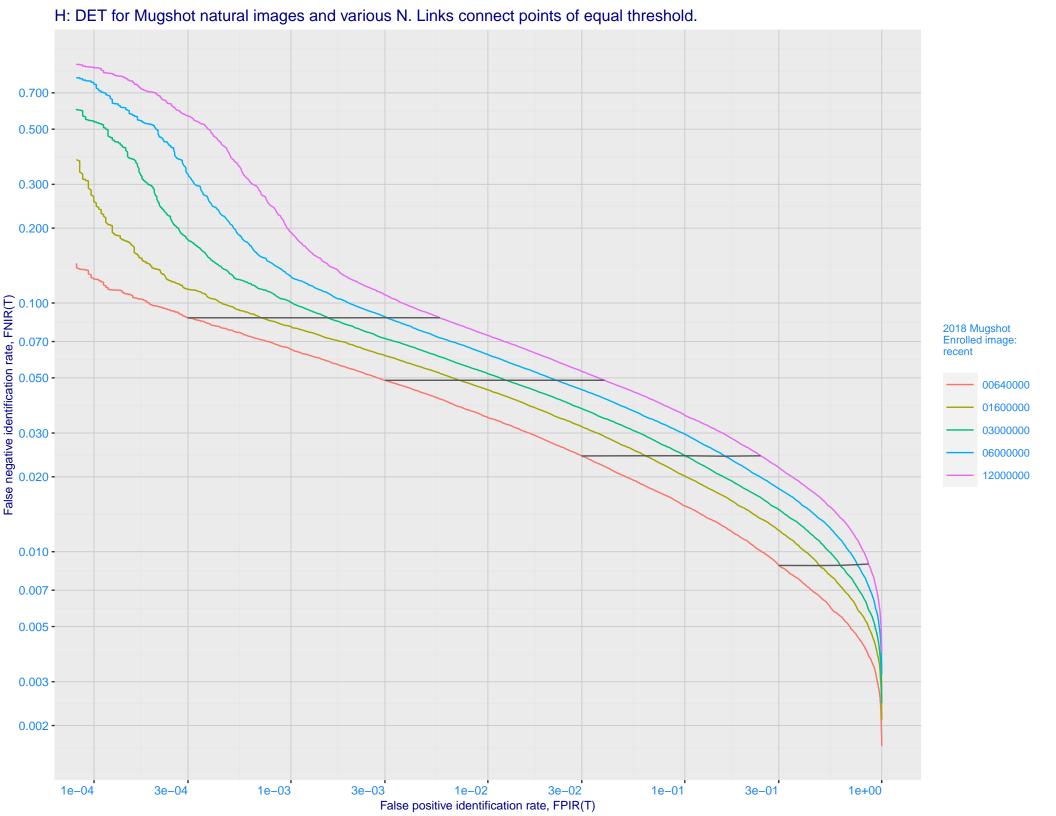
False positive identification rate, FPIR(T)

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

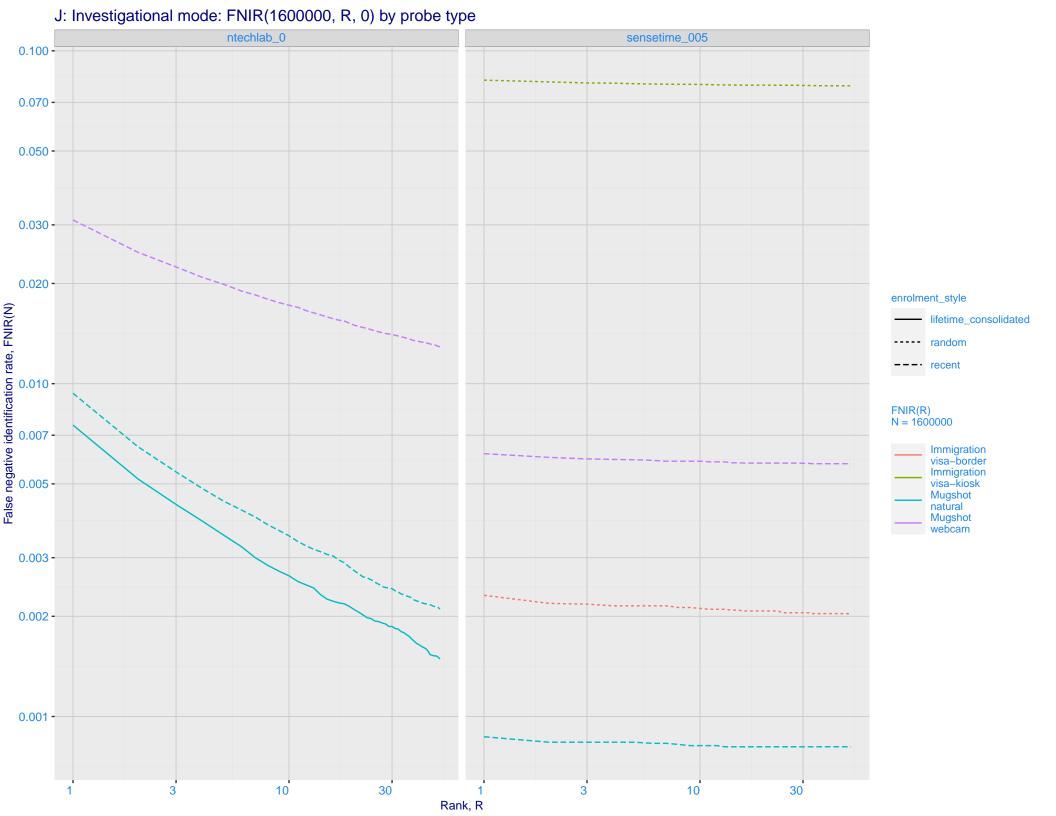


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 -5e-02 -3e-02 -3e-02 -1e-02 -**Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam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

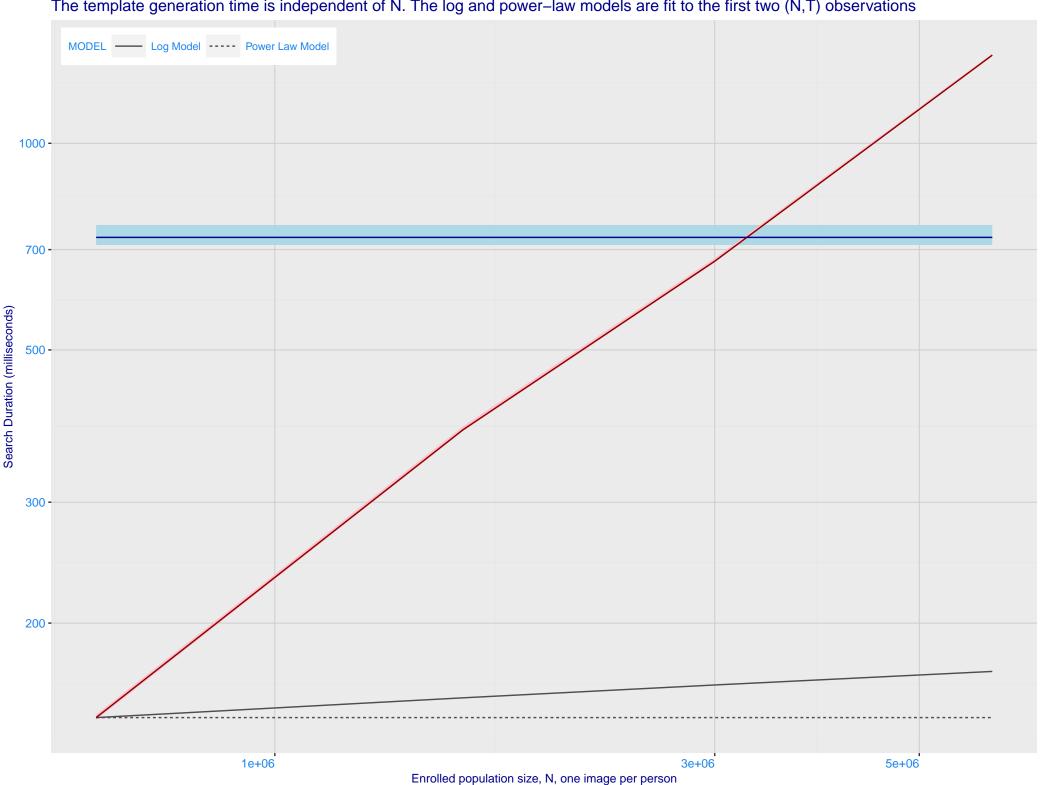




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Palse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.050 - 0.030 - 0. enrolment_style consolidated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



