A: Datasheet

Algorithm: rankone_0

Developer: Rank One Computing

Submission Date: 2018_02_07

Template size: 228 bytes

Template time (2.5 percentile): 47 msec

Template time (median): 50 msec

Template time (97.5 percentile): 56 msec

Investigation:

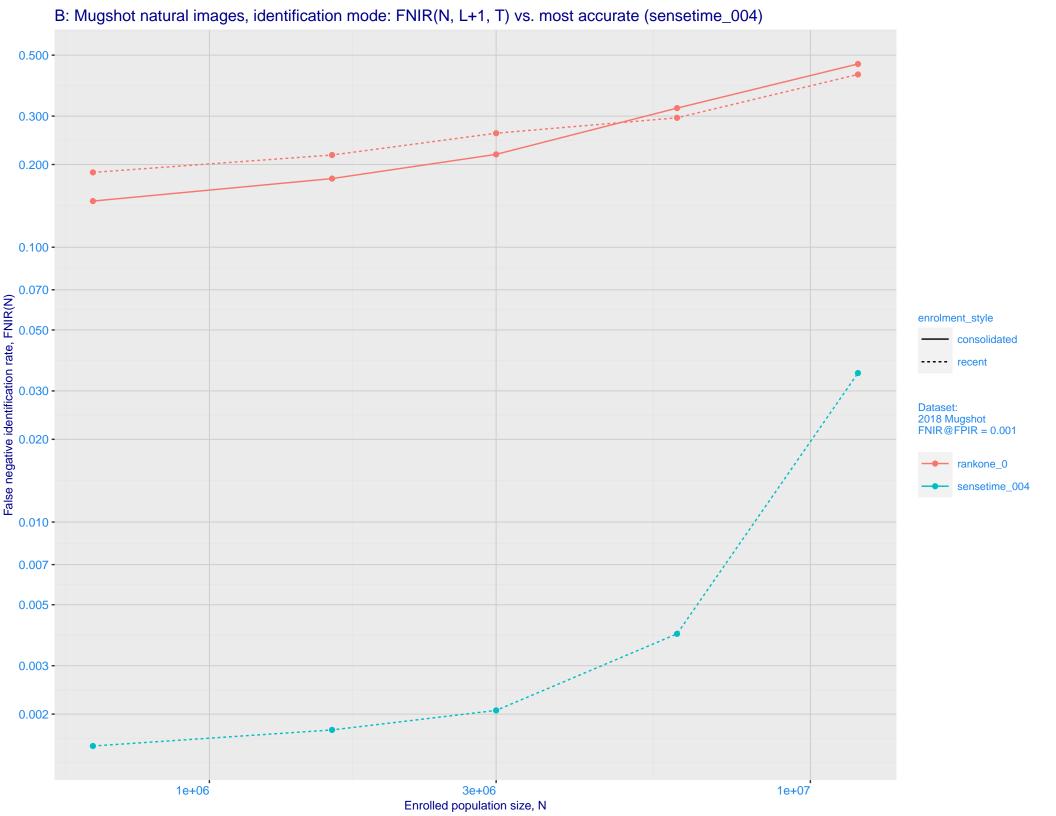
Frontal mugshot ranking 197 (out of 265) -- FNIR(1600000, 0, 1) = 0.0429 vs. lowest 0.0009 from sensetime_005

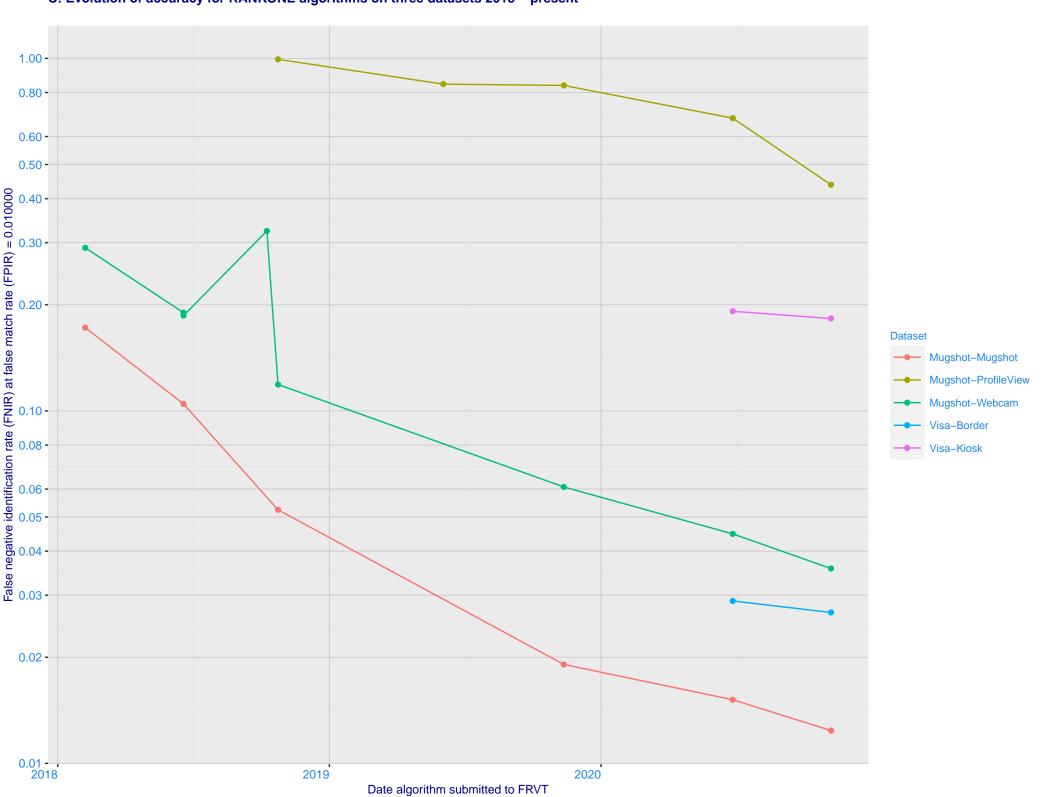
Mugshot webcam ranking 183 (out of 227) -- FNIR(1600000, 0, 1) = 0.1172 vs. lowest 0.0062 from sensetime_005

Identification:

Frontal mugshot ranking 178 (out of 265) -- FNIR(1600000, T, L+1) = 0.2165, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 171 (out of 225) -- FNIR(1600000, T, L+1) = 0.3912, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

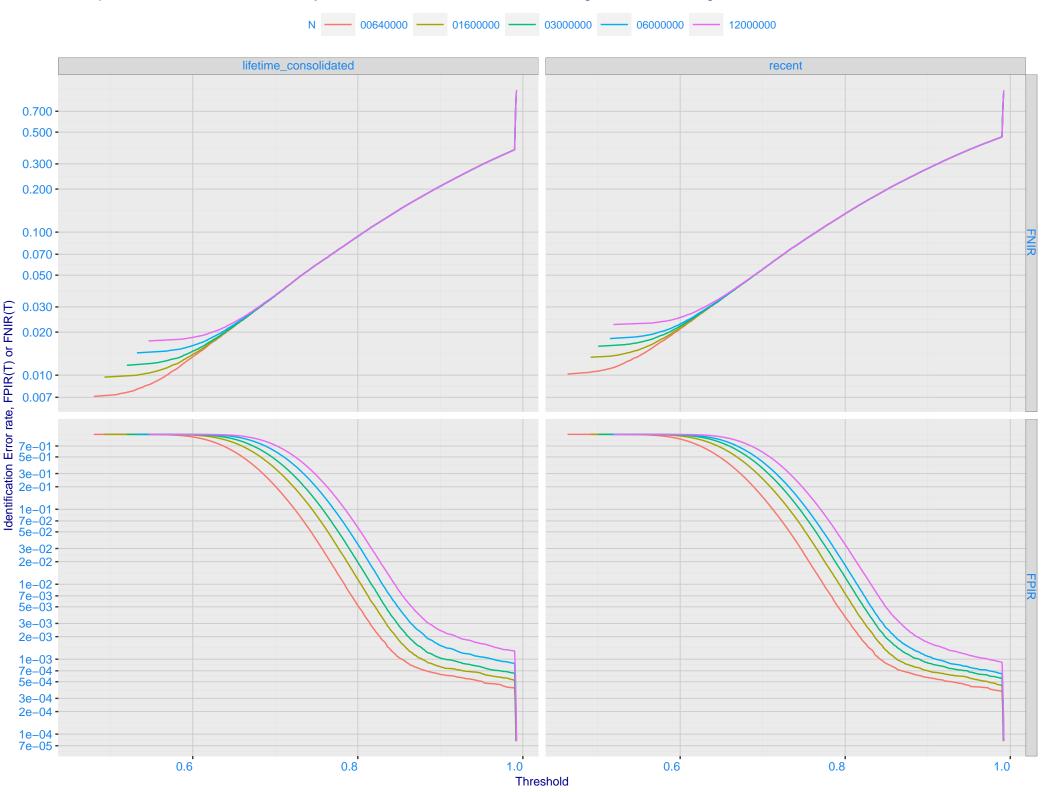




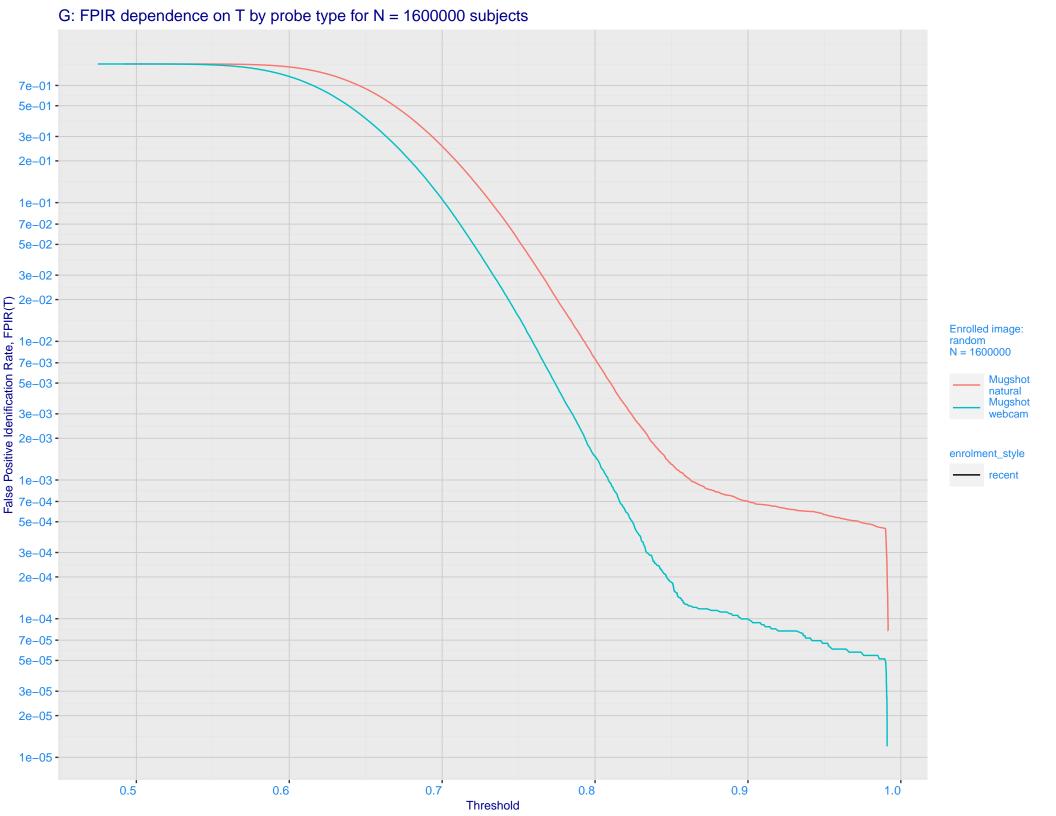
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals **Immigration** Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.000 - 0.000 - 0.500 - 0.200 - 0. enrolment_style consolidated-ONE-MATE 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 -

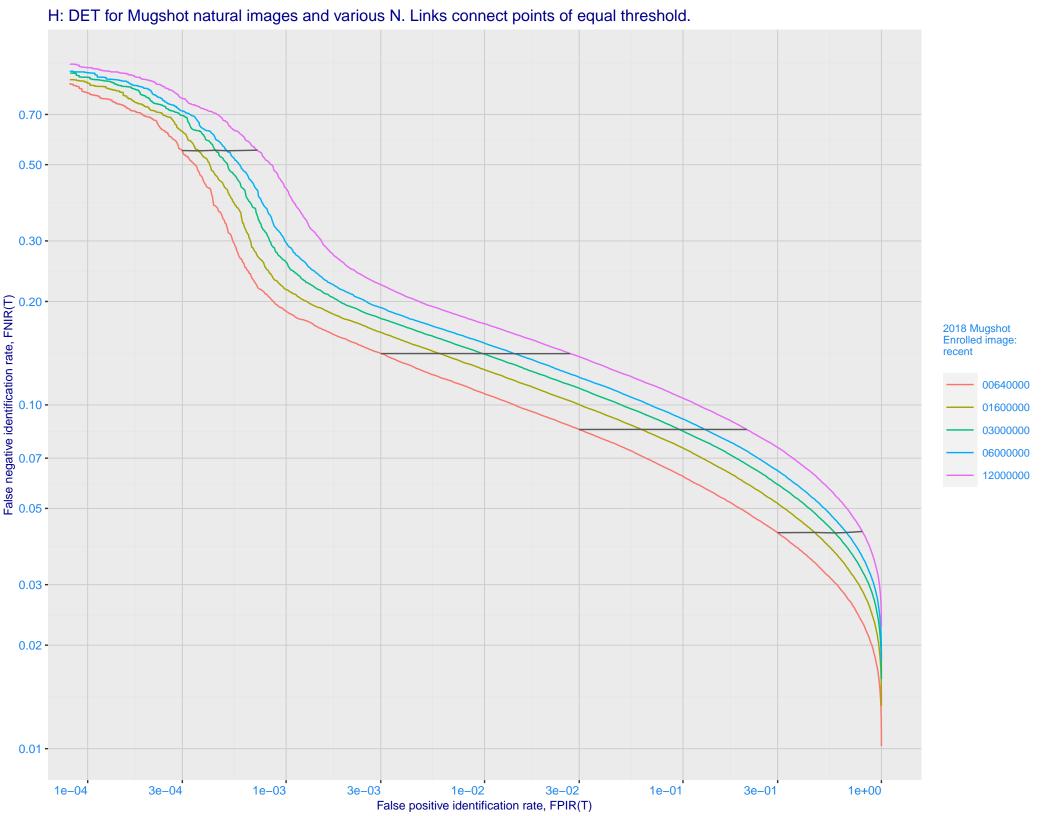
0.001 -

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

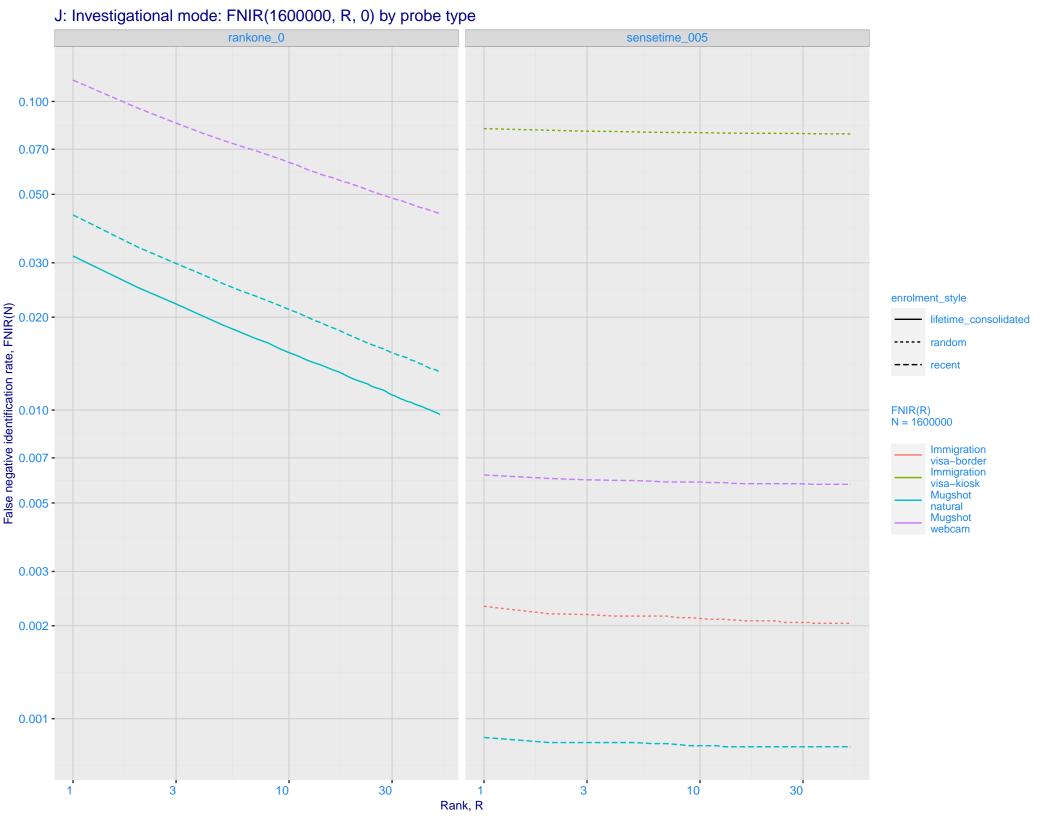


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00-3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -(E) 7e-02 - 7e **Enrolled images:** recent N = 1600000 Mugshot natural Mugshot webcam 7e-03 -5e-03 -3e-03 -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)

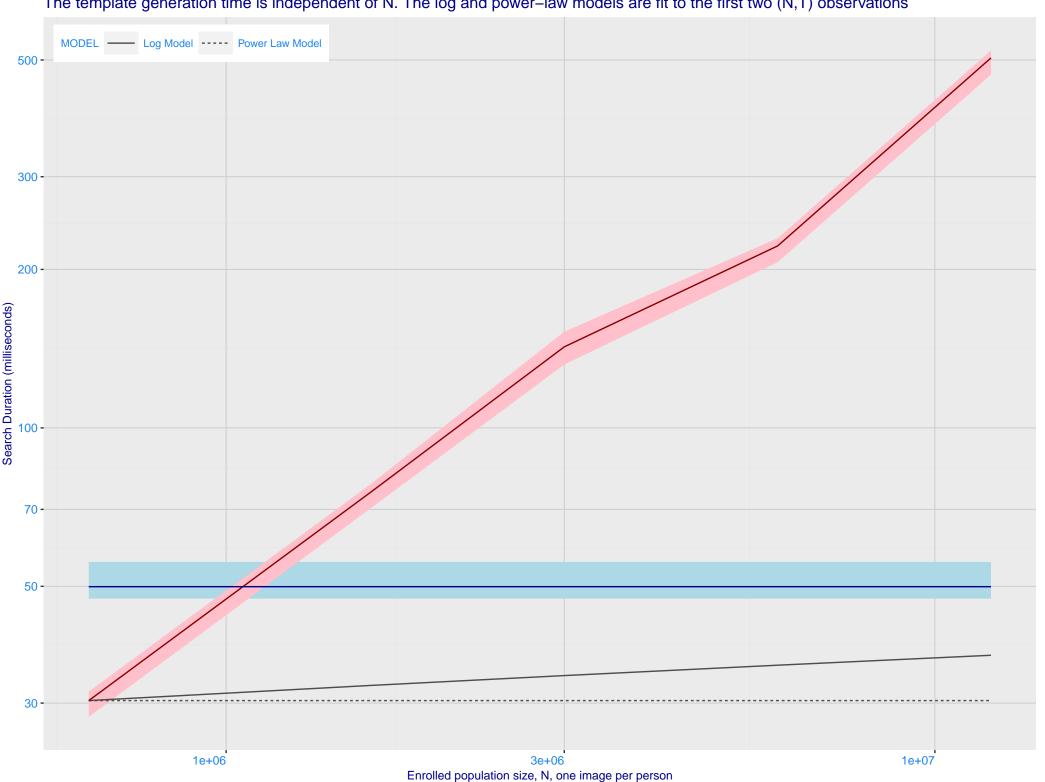




I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 - 0.002 - 0.001 - 0.001 - 0.000 - 0.000 - 0.050 enrolment_style consolidated ---- random --- recent Mugshot webcam Mugshot natural FNIR@Rank = 1 rankone_0 - sensetime_005 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

