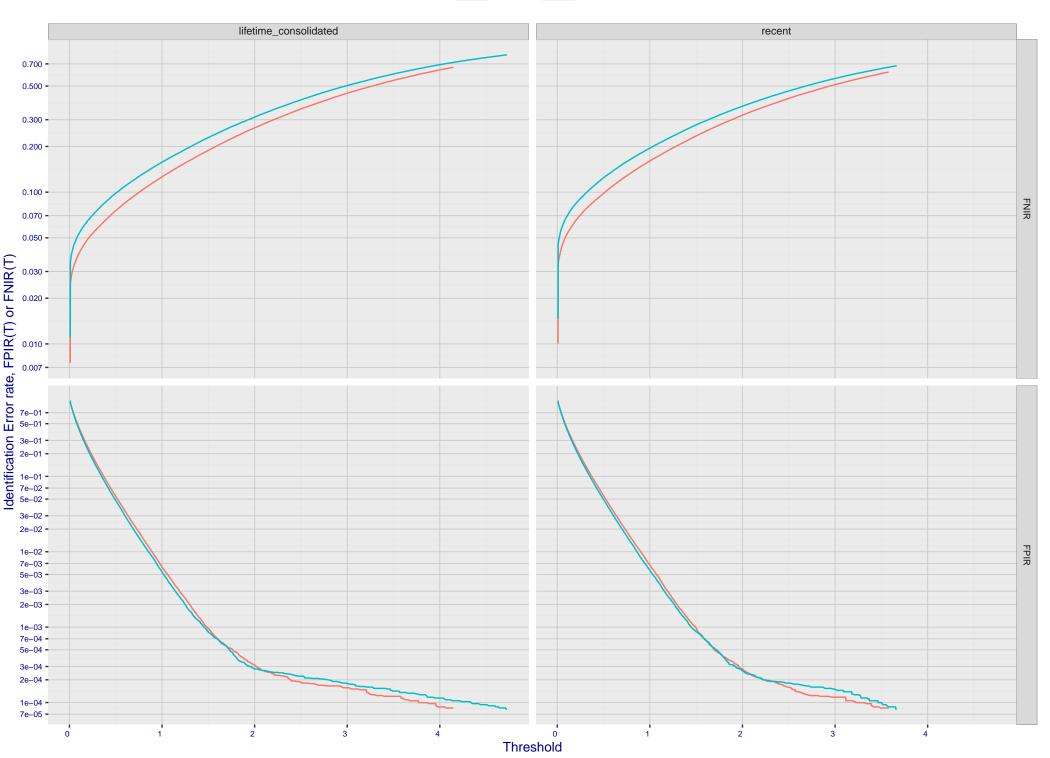
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-kiosk visa-border natural 0.70 -0.50 -0.30 -False negative identification rate, FNIR(T) enrolment_style consolidated-ONE-MATE random-ONE-MATE recent-ONE-MATE 0.03 -0.02 -0.01 -1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00

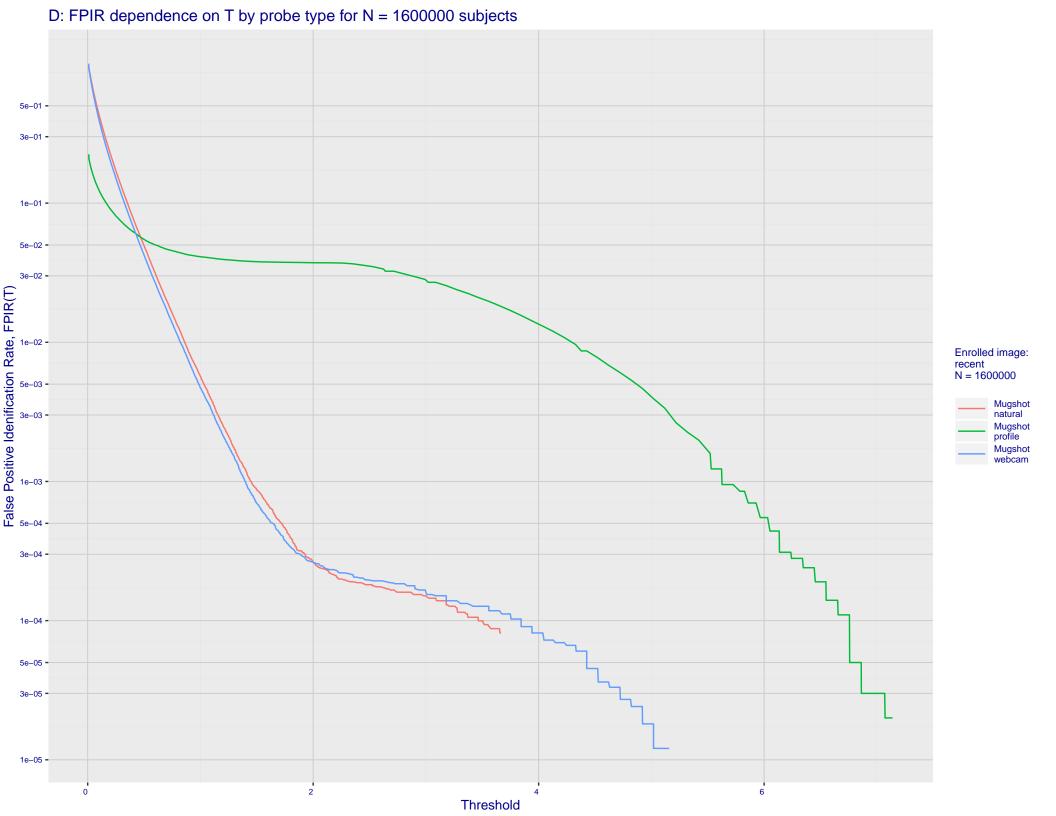
False positive identification rate, FPIR(T)

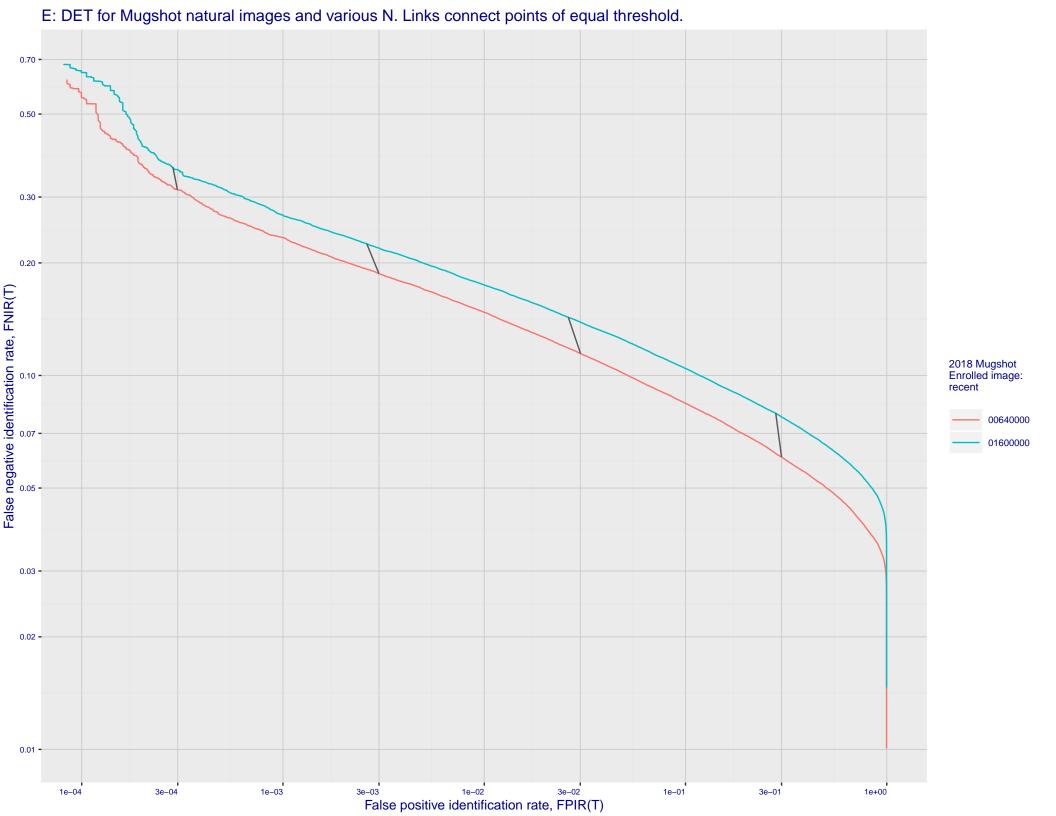
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

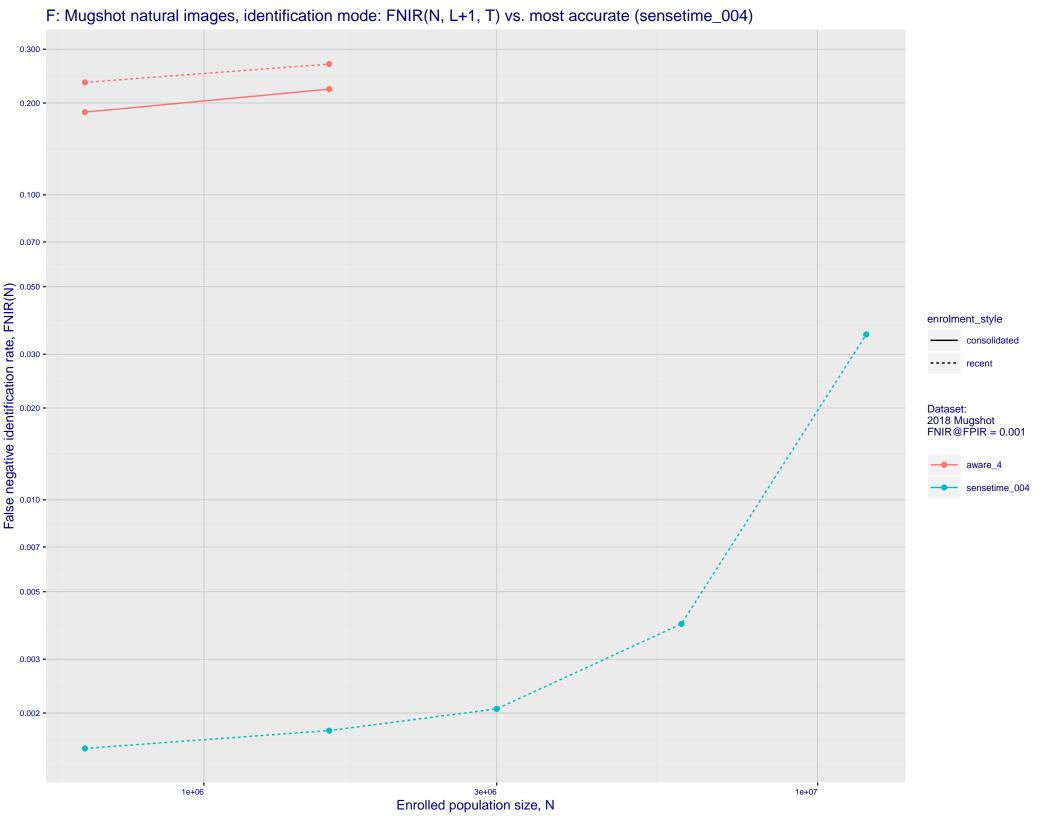




C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 3e+01 2e+01 -1e+01 7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 2e-01 1e-01 **-**Enrolled images: recent N = 1600000 7e-02 -7e-02 -5e-02 -7e-02 -3e-02 -1e-02 -7e-03 -Mugshot natural Mugshot profile 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-01 3e-01 False Positive Idenification Rate, FPIR(T)

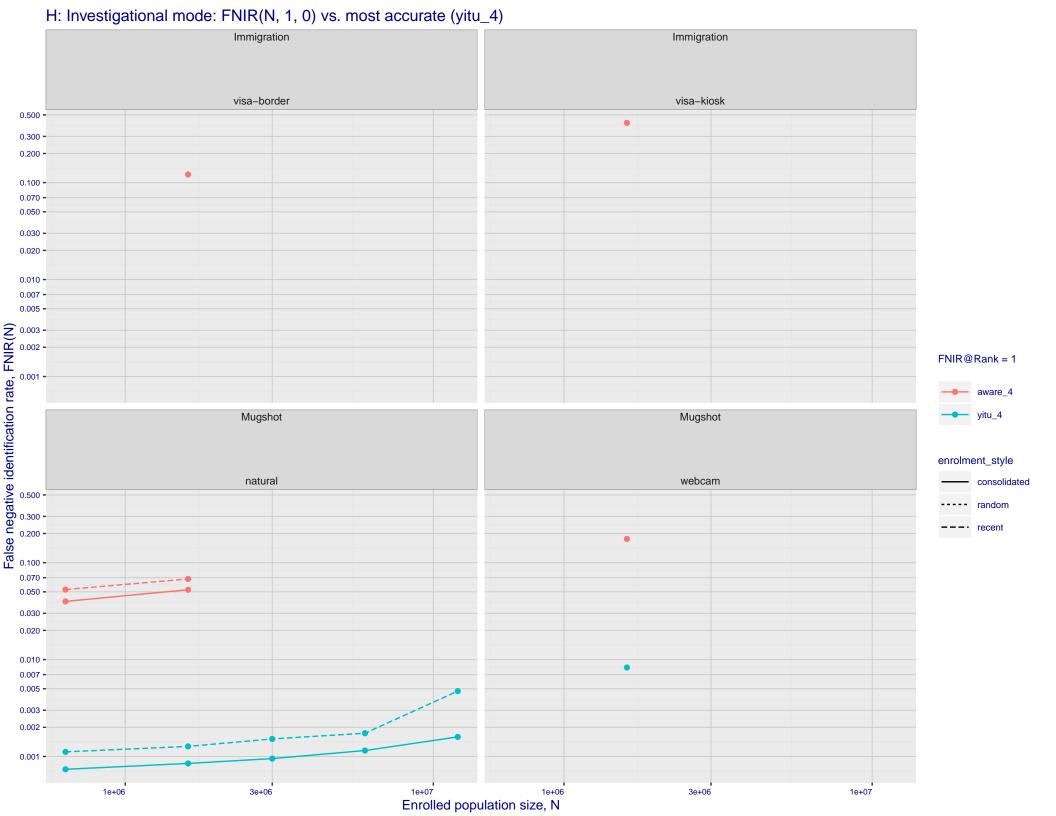


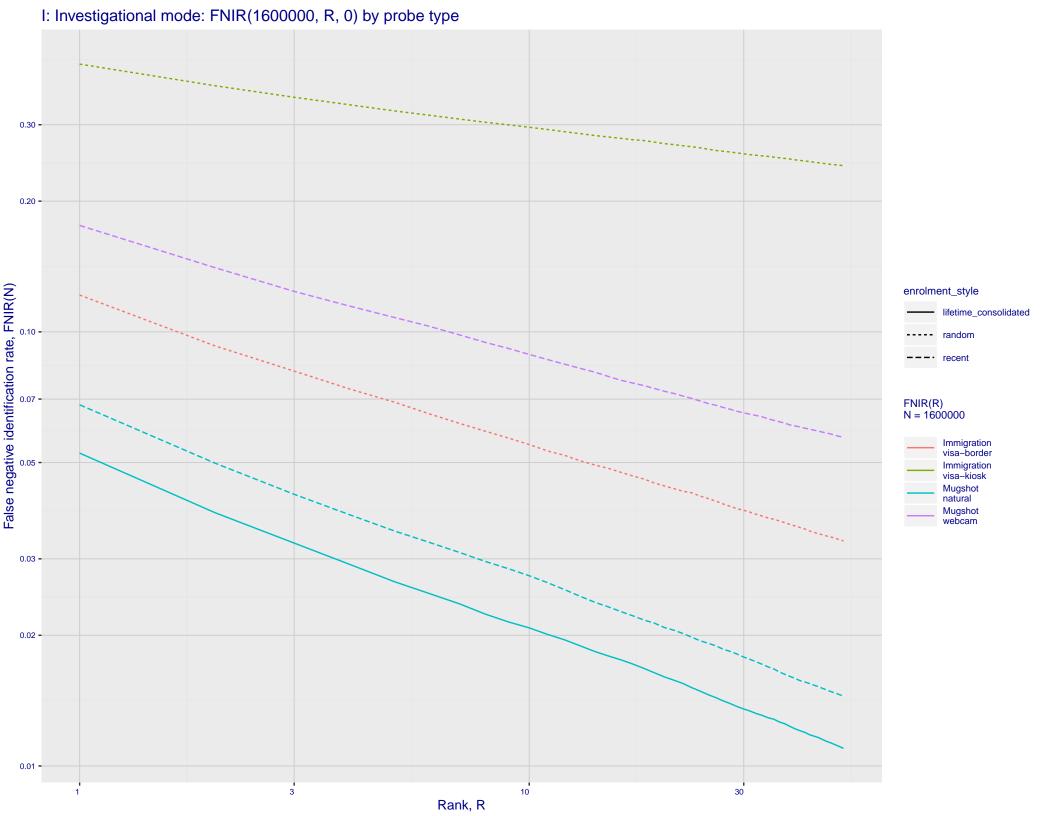




G: Datasheet

Algorithm: aware_4 Developer: Aware Submission Date: 2018_06_22 Template size: 92 bytes Template time (2.5 percentile): 678 msec Template time (median): 705 msec Template time (97.5 percentile): 785 msec Frontal mugshot investigation rank 198 — FNIR(1600000, 0, 1) = 0.0679 vs. lowest 0.0010 from sensetime_004 natural investigation rank 177 -- FNIR(1600000, 0, 1) = 0.1758 vs. lowest 0.0067 from sensetime_003 natural investigation rank 307 -- FNIR(1600000, 0, 1) = 0.9660 vs. lowest 0.0492 from paravision_005 natural investigation rank 307 -- FNIR(1600000, 0, 1) = 0.9660 vs. lowest 0.0492 from paravision_005 natural investigation rank 83 -- FNIR(1600000, 0, 1) = 0.1216 vs. lowest 0.0014 from visionlabs_009 natural investigation rank 90 -- FNIR(1600000, 0, 1) = 0.4138 vs. lowest 0.0694 from cib_000 Frontal mugshot identification rank 177 -- FNIR(1600000, T, L+1) = 0.2683 vs. lowest 0.0018 from sensetime_004 natural identification rank 170 -- FNIR(1600000, T, L+1) = 0.5094 vs. lowest 0.0122 from sensetime_003 natural identification rank 143 -- FNIR(1600000, T, L+1) = 0.9996 vs. lowest 0.1020 from sensetime_004 natural identification rank 74 -- FNIR(1600000, T, L+1) = 0.3972 vs. lowest 0.0059 from sensetime_004 natural identification rank 70 -- FNIR(1600000, T, L+1) = 0.8180 vs. lowest 0.1129 from visionlabs_009





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

