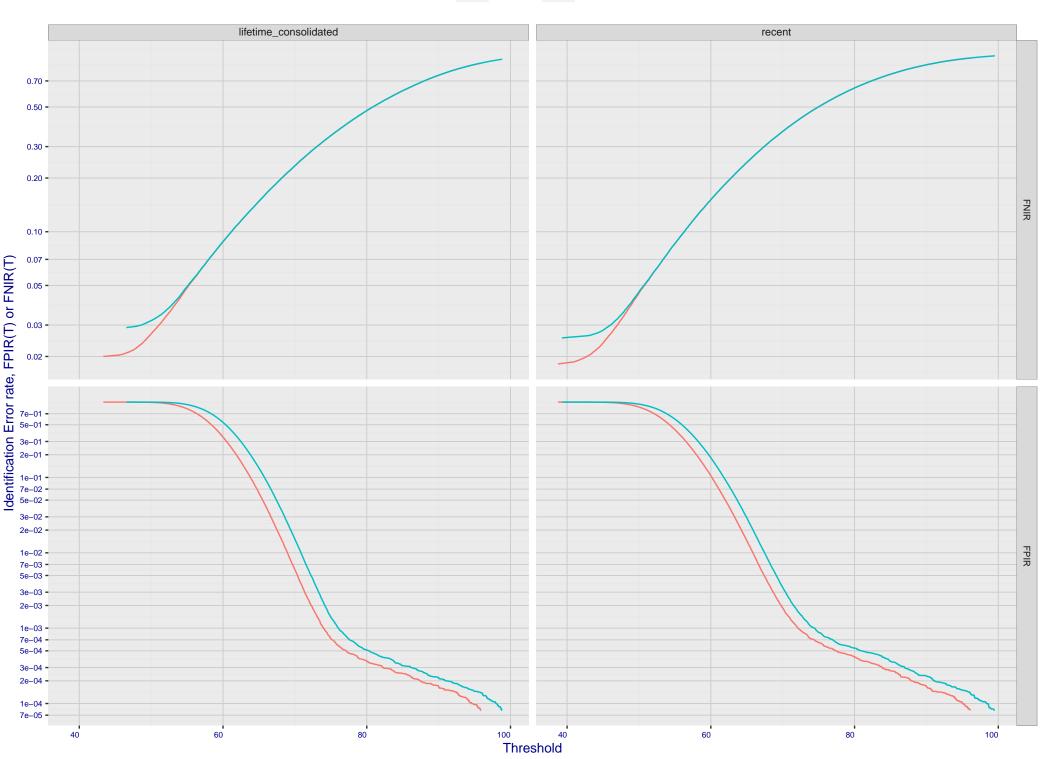
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.70 -0.50 False negative identification rate, FNIR(T) enrolment_style consolidated-ONE-MATE random-ONE-MATE recent-ONE-MATE unconsolidated-ALL-MATES unconsolidated-ANY-MATE 0.05 -0.03 -0.02 -

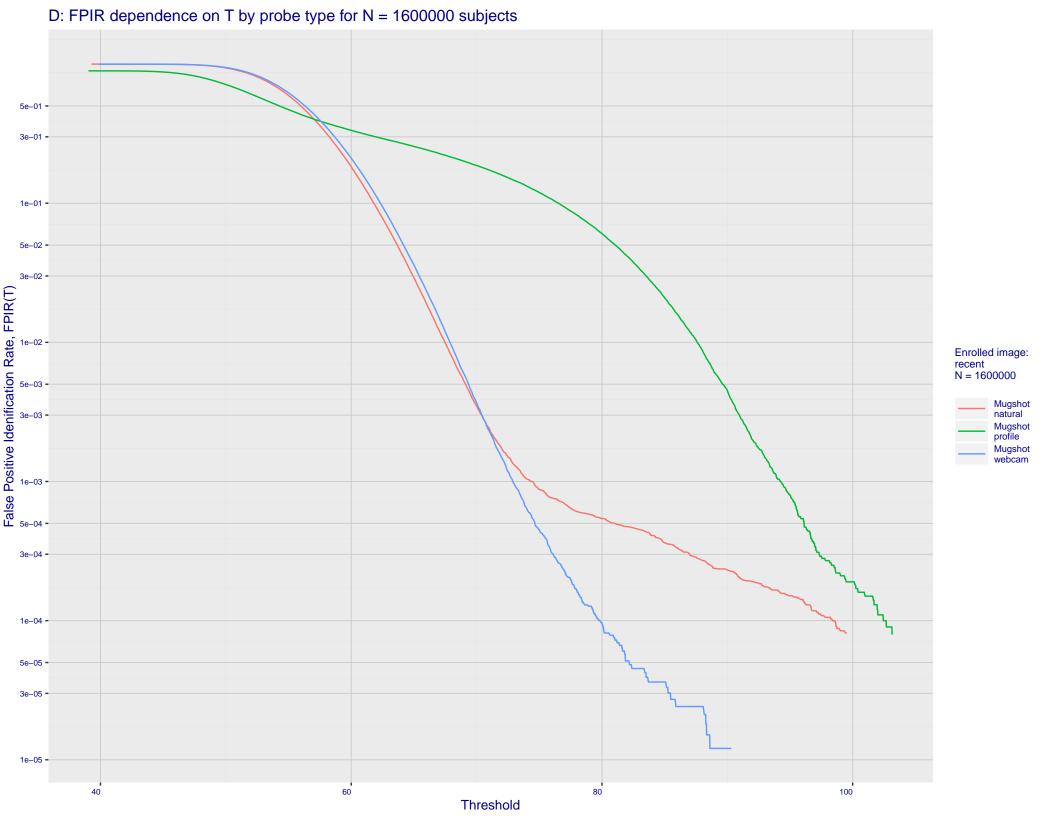
1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 False positive identification rate, FPIR(T)

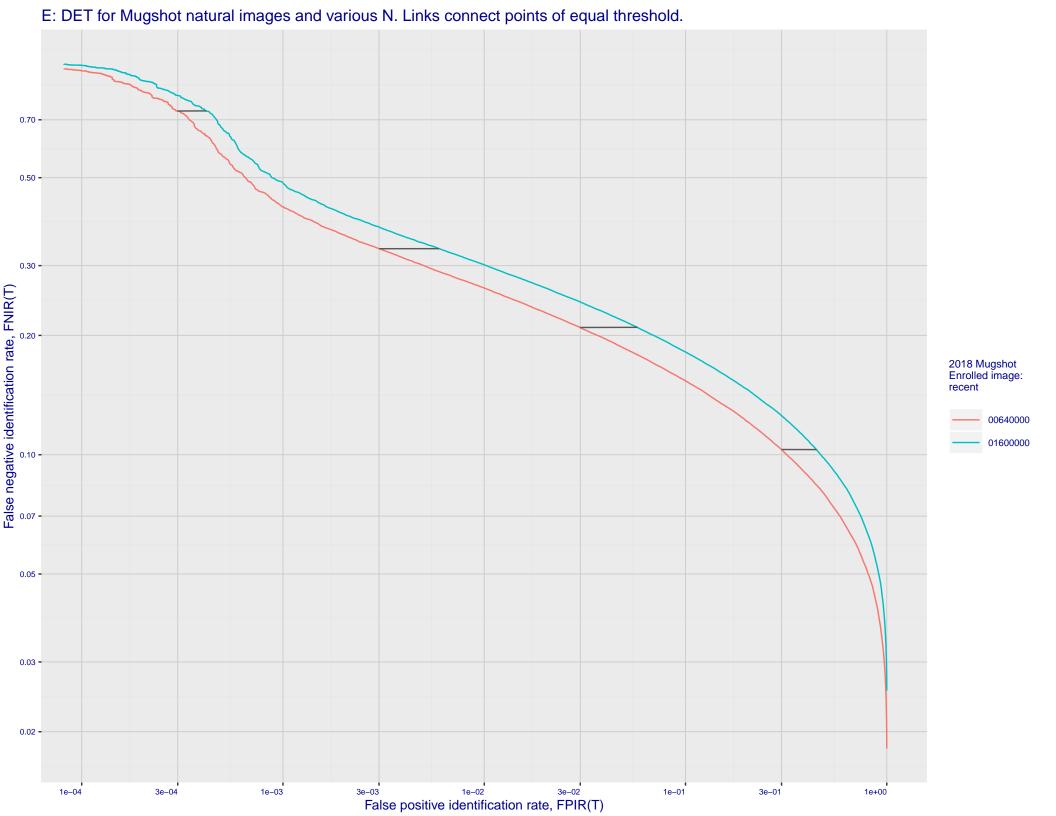
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

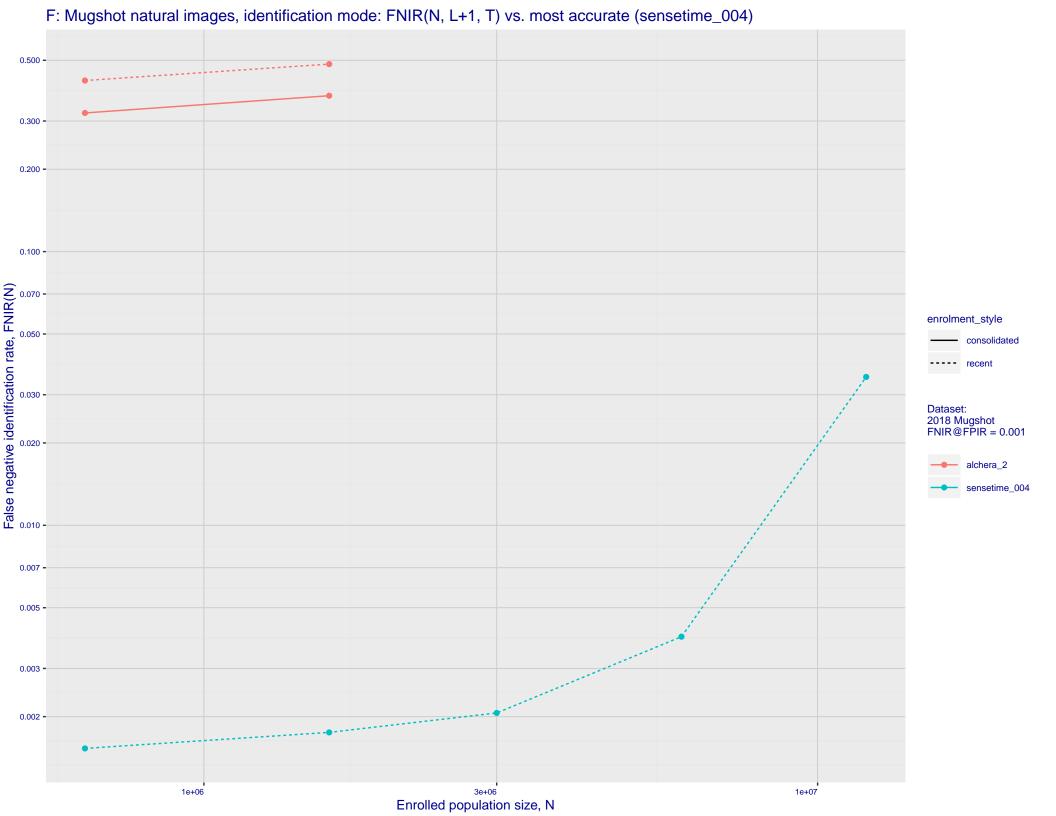




C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 3e+01 2e+01 1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -Enrolled images: recent N = 1600000 1e-01 - 7e-02 - 7e-02 - 3e-02 - 2e-02 - 2e-02 - 7e-02 Mugshot natural Mugshot profile Mugshot webcam 1e-02 -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 3e-05 1e-04 3e-04 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)

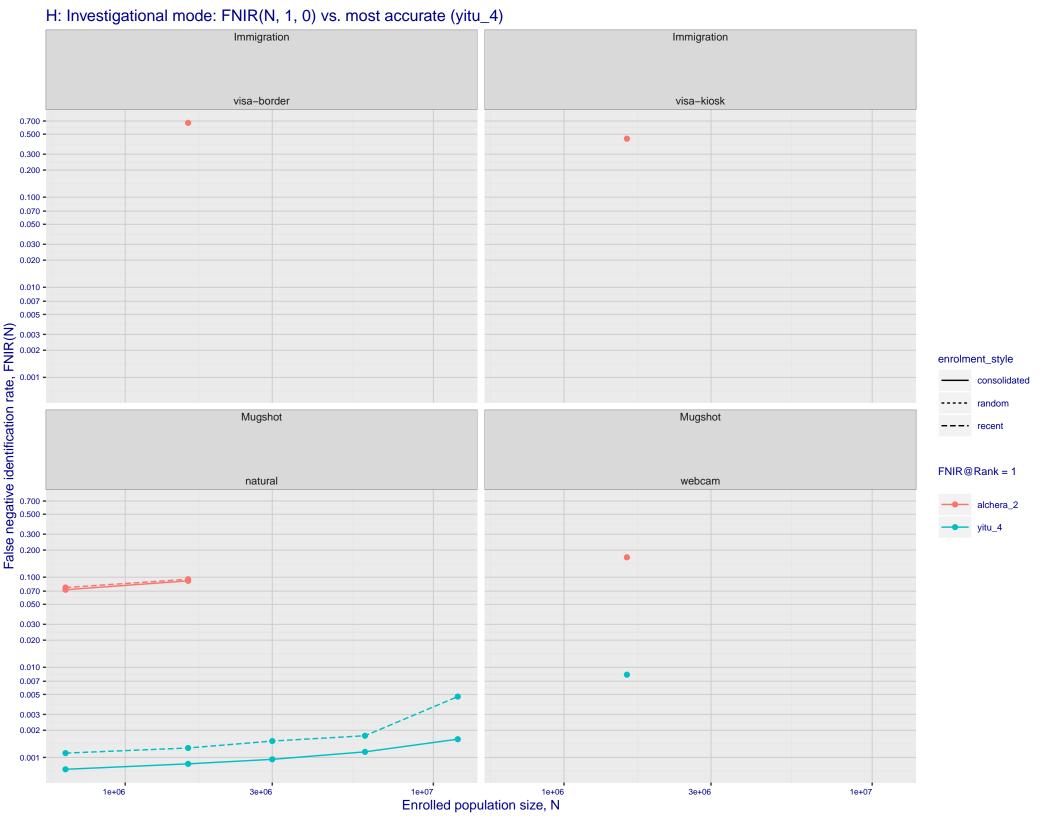


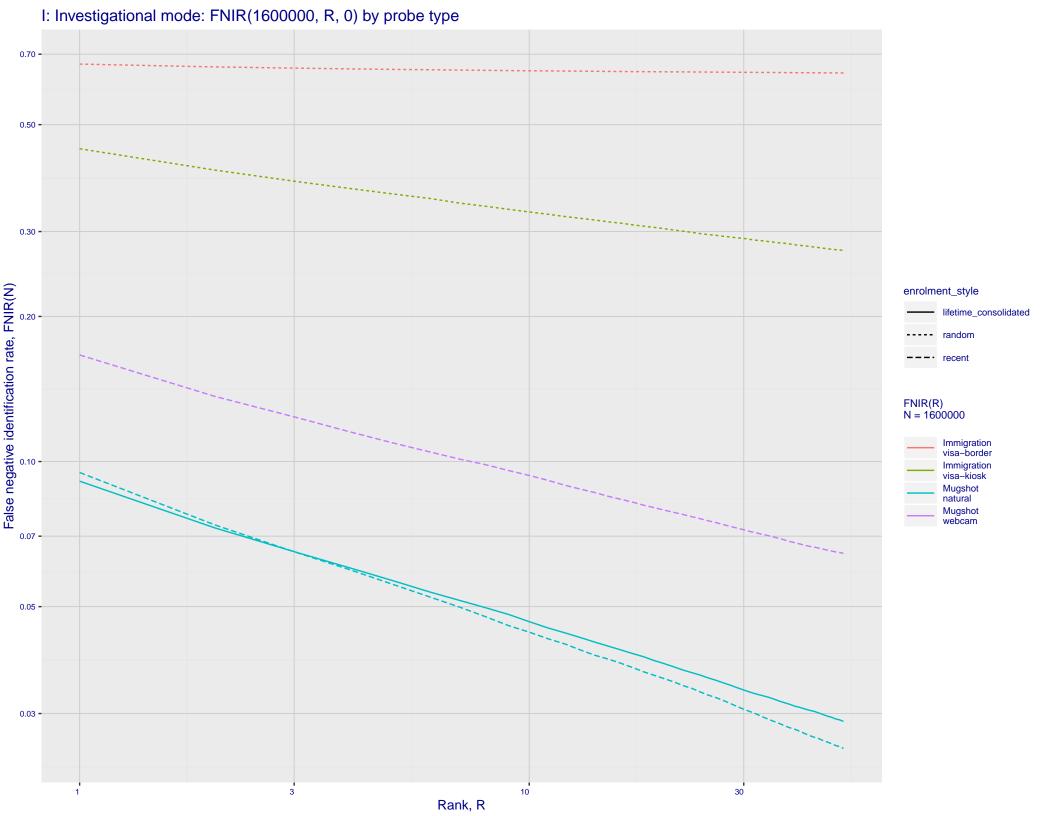




G: Datasheet

Algorithm: alchera_2 Developer: Alchera Inc Submission Date: 2018_10_30 Template size: 2048 bytes Template time (2.5 percentile): 102 msec Template time (median): 114 msec Template time (97.5 percentile): 139 msec Frontal mugshot investigation rank 204 -- FNIR(1600000, 0, 1) = 0.0949 vs. lowest 0.0010 from sensetime_004 natural investigation rank 175 -- FNIR(1600000, 0, 1) = 0.1664 vs. lowest 0.0067 from sensetime_003 natural investigation rank 217 -- FNIR(1600000, 0, 1) = 0.8904 vs. lowest 0.0492 from paravision_005 natural investigation rank 217 -- FNIR(1600000, 0, 1) = 0.8904 vs. lowest 0.0492 from paravision_005 natural investigation rank 93 -- FNIR(1600000, 0, 1) = 0.6677 vs. lowest 0.0014 from visionlabs_009 natural investigation rank 91 -- FNIR(1600000, 0, 1) = 0.4456 vs. lowest 0.0694 from cib_000 Frontal mugshot identification rank 205 -- FNIR(1600000, T, L+1) = 0.4843 vs. lowest 0.0018 from sensetime_004 natural identification rank 175 -- FNIR(1600000, T, L+1) = 0.5907 vs. lowest 0.0122 from sensetime_003 natural identification rank 144 -- FNIR(1600000, T, L+1) = 0.9996 vs. lowest 0.1020 from sensetime_004 natural identification rank 83 -- FNIR(1600000, T, L+1) = 0.8266 vs. lowest 0.0059 from sensetime_004 natural identification rank 69 -- FNIR(1600000, T, L+1) = 0.8159 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

