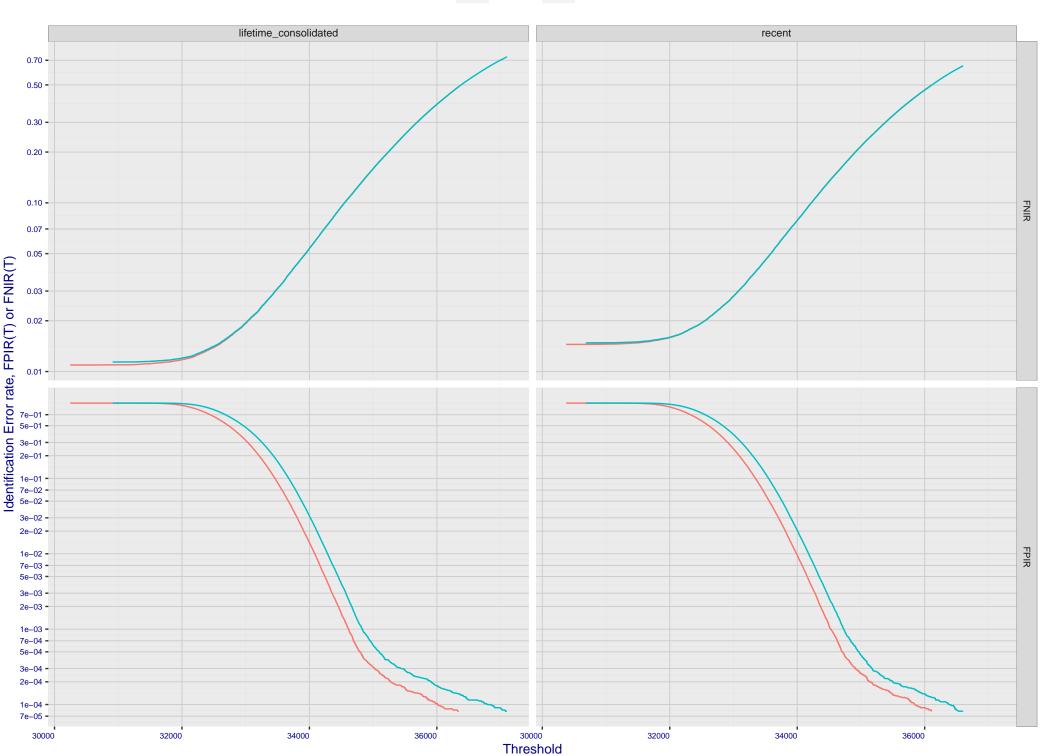
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.70 -0.50 -0.30 -False negative identification rate, FNIR(T) enrolment_style consolidated-ONE-MATE random-ONE-MATE recent-ONE-MATE unconsolidated-ALL-MATES unconsolidated-ANY-MATE 0.03 -0.02 -0.01 -

False positive identification rate, FPIR(T)

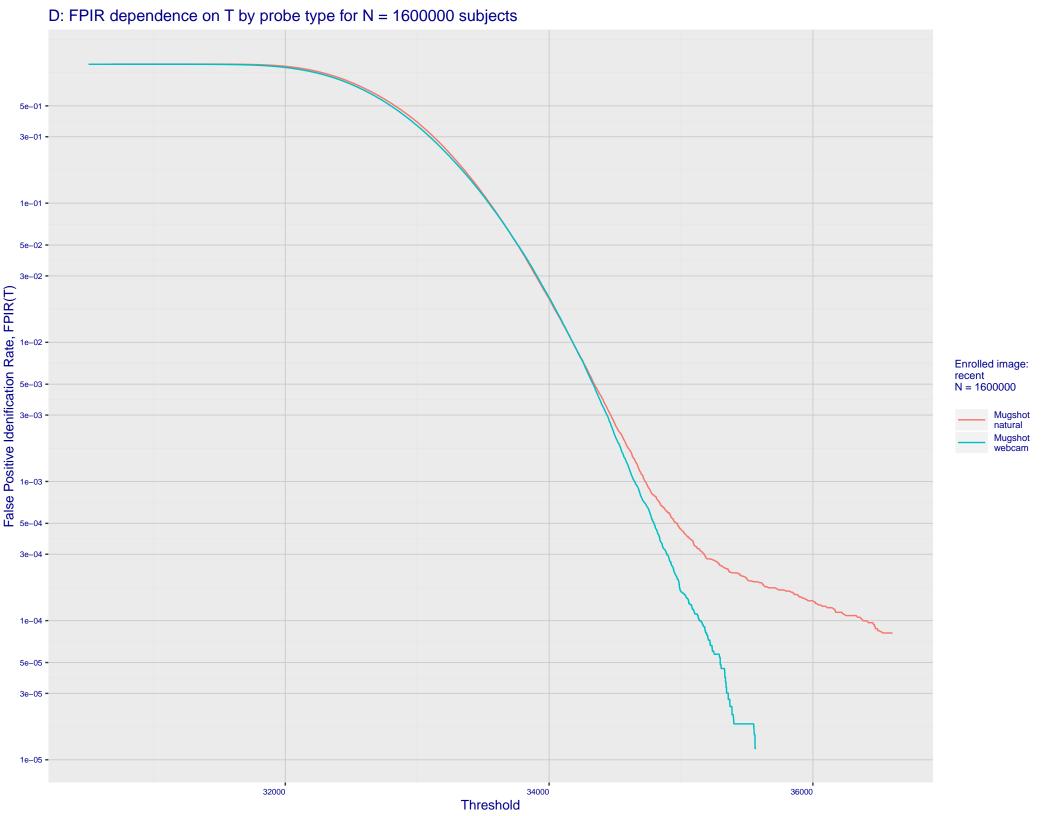
1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00

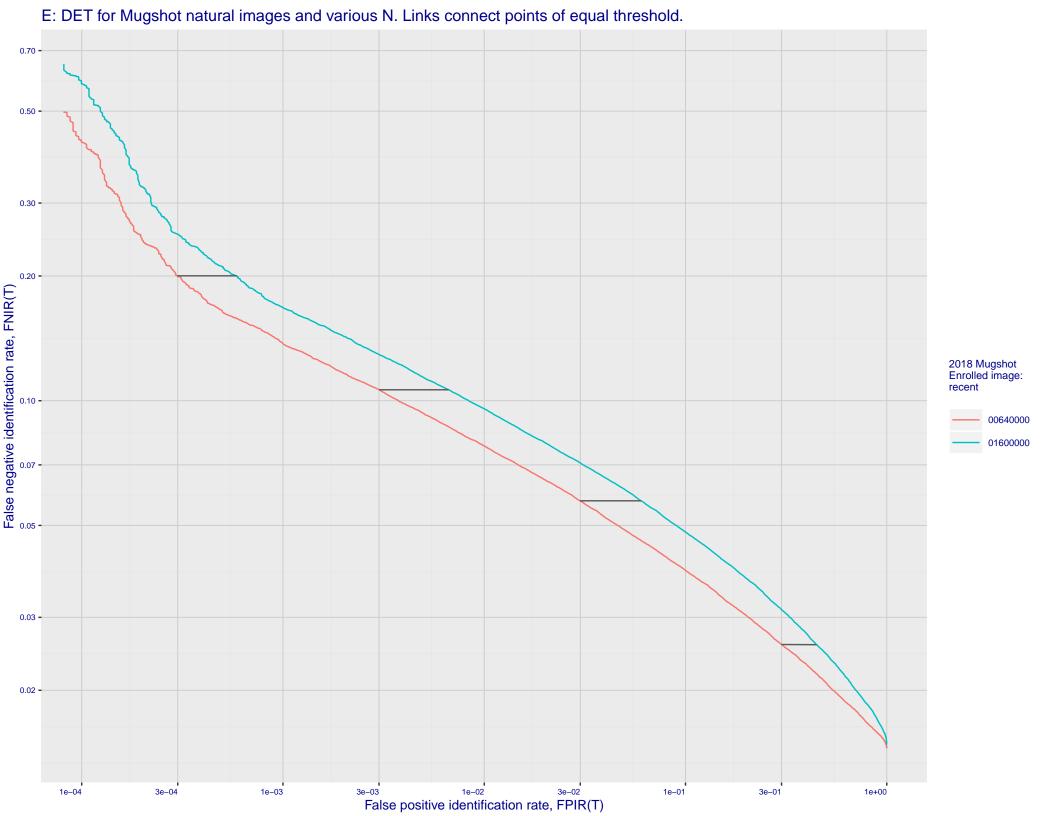
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

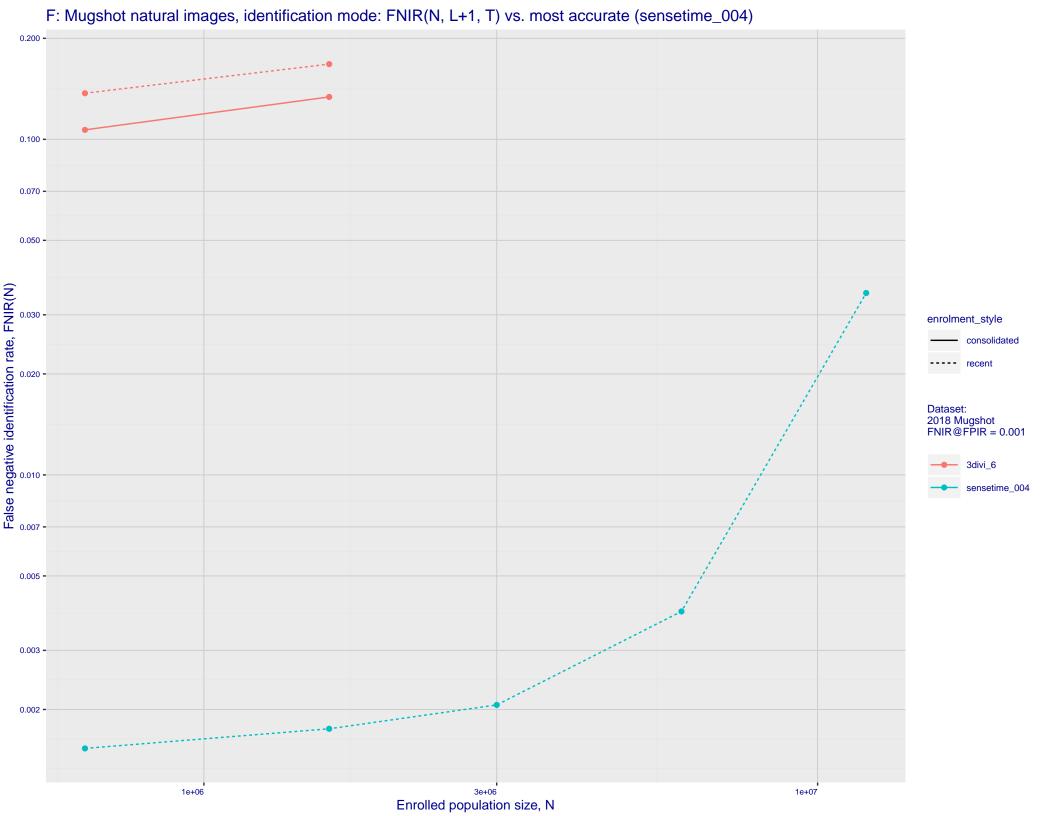




C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 - 7e-02 - 7e-03 Enrolled images: recent N = 1600000Mugshot natural Mugshot webcam 7e-03 5e-03 -3e-03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







G: Datasheet

Algorithm: 3divi_6

Developer: 3Divi

Submission Date: 2018_10_26

Template size: 528 bytes

Template time (2.5 percentile): 507 msec

Template time (median): 640 msec

Template time (97.5 percentile): 869 msec

Frontal mugshot investigation rank 160 -- FNIR(1600000, 0, 1) = 0.0240 vs. lowest 0.0010 from sensetime_004

natural investigation rank 154 -- FNIR(1600000, 0, 1) = 0.0741 vs. lowest 0.0067 from sensetime_003

natural investigation rank 75 -- FNIR(1600000, 0, 1) = 0.0465 vs. lowest 0.0014 from visionlabs_009

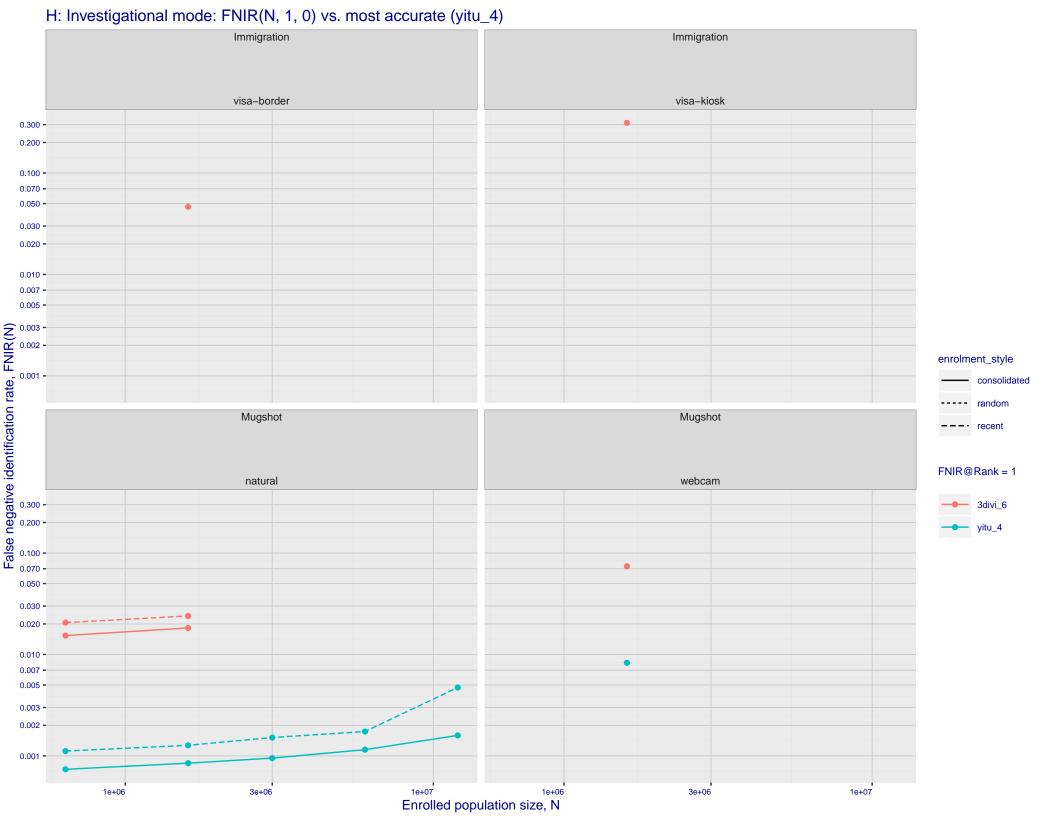
natural investigation rank 84 — FNIR(1600000, 0, 1) = 0.3122 vs. lowest 0.0694 from cib_000

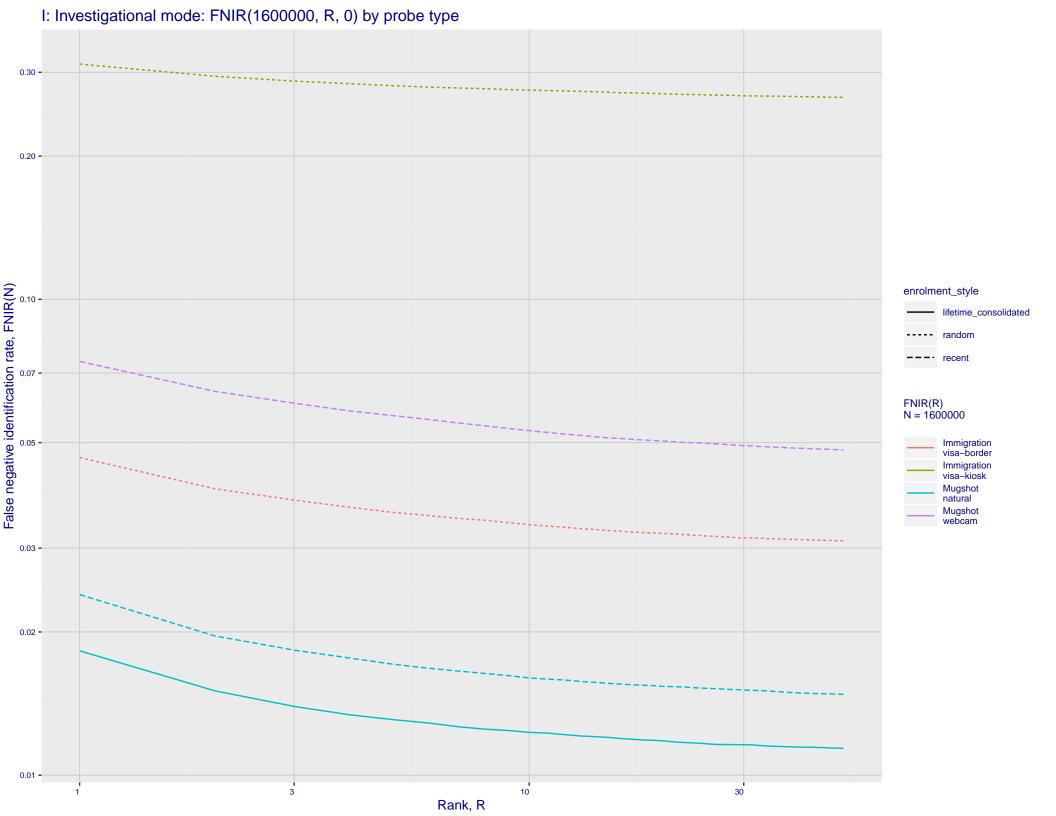
Frontal mugshot identification rank 154 -- FNIR(1600000, T, L+1) = 0.1676 vs. lowest 0.0018 from sensetime_004

natural identification rank 152 -- FNIR(1600000, T, L+1) = 0.3418 vs. lowest 0.0122 from sensetime_003

natural identification rank 70 -- FNIR(1600000, T, L+1) = 0.2827 vs. lowest 0.0059 from sensetime_004

natural identification rank 58 -- FNIR(1600000, T, L+1) = 0.6172 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 1000 - Log Model ----- Power Law Model 700 500 -300 200 -100 -70 -50 30 20 -10 -7e+05 8e+05 Enrolled population size, N, one image per person

Search Duration (milliseconds)