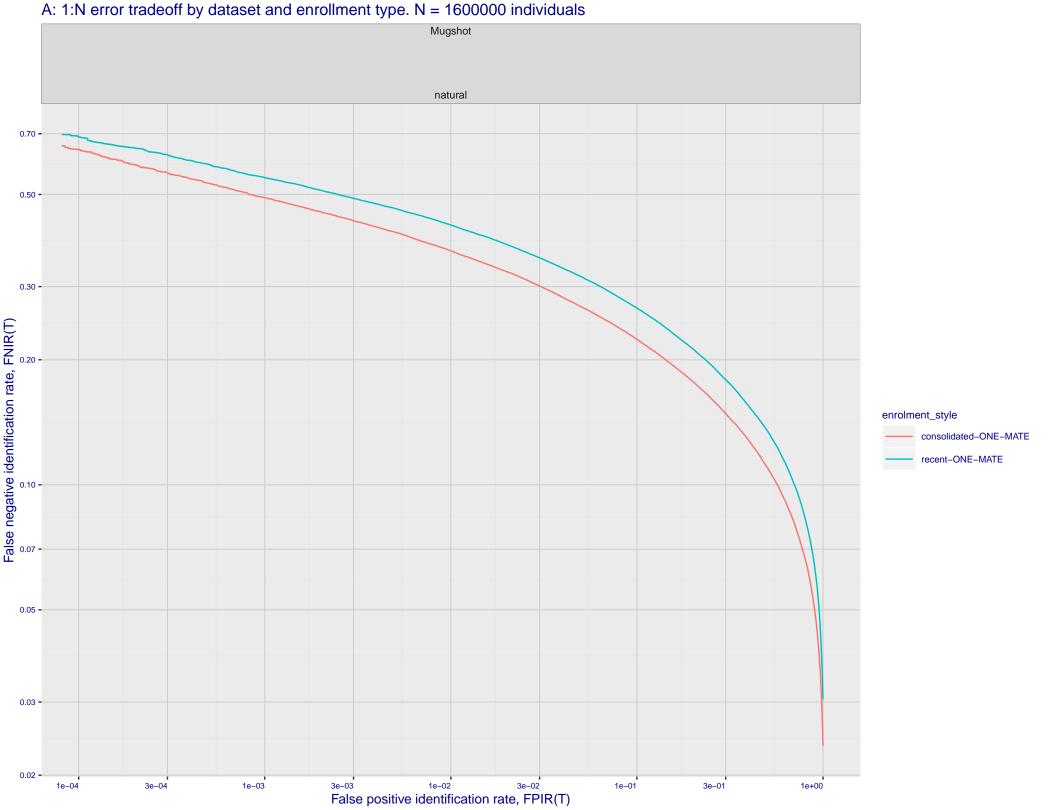
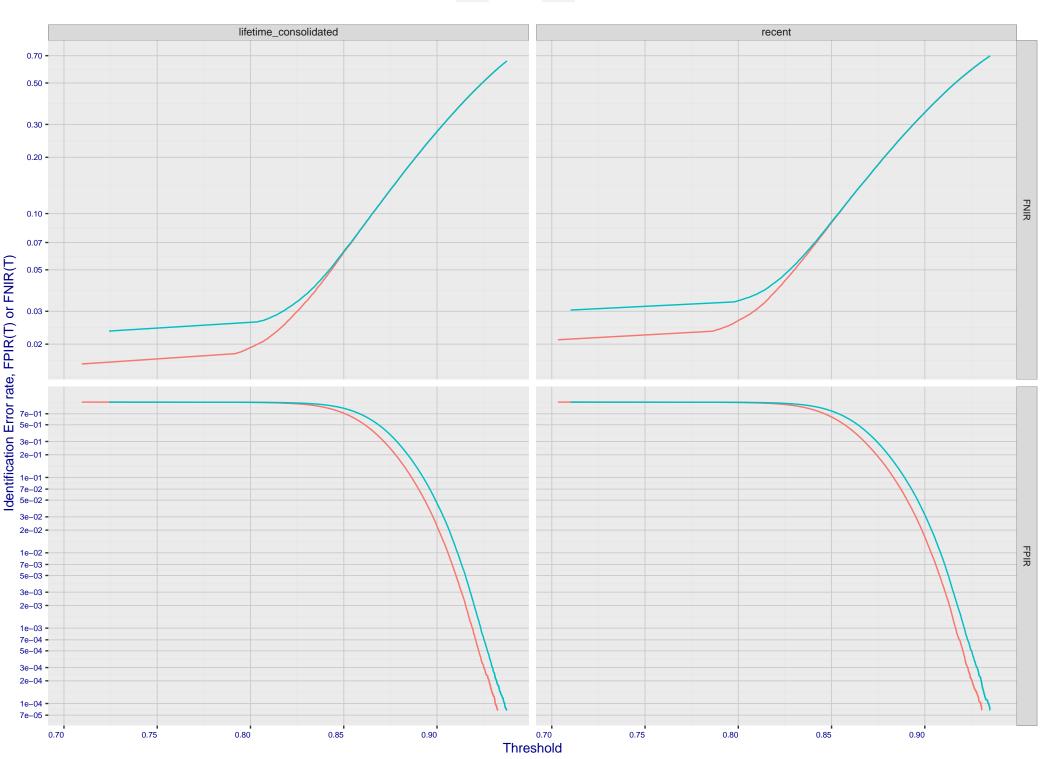
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals

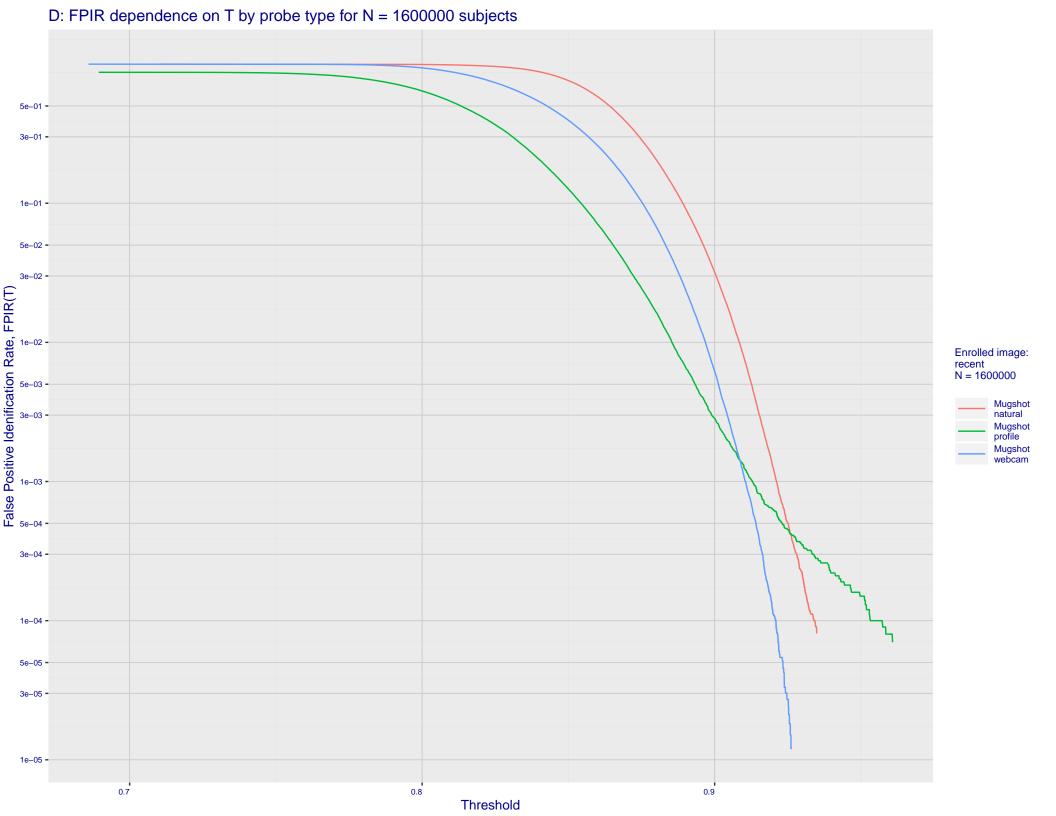


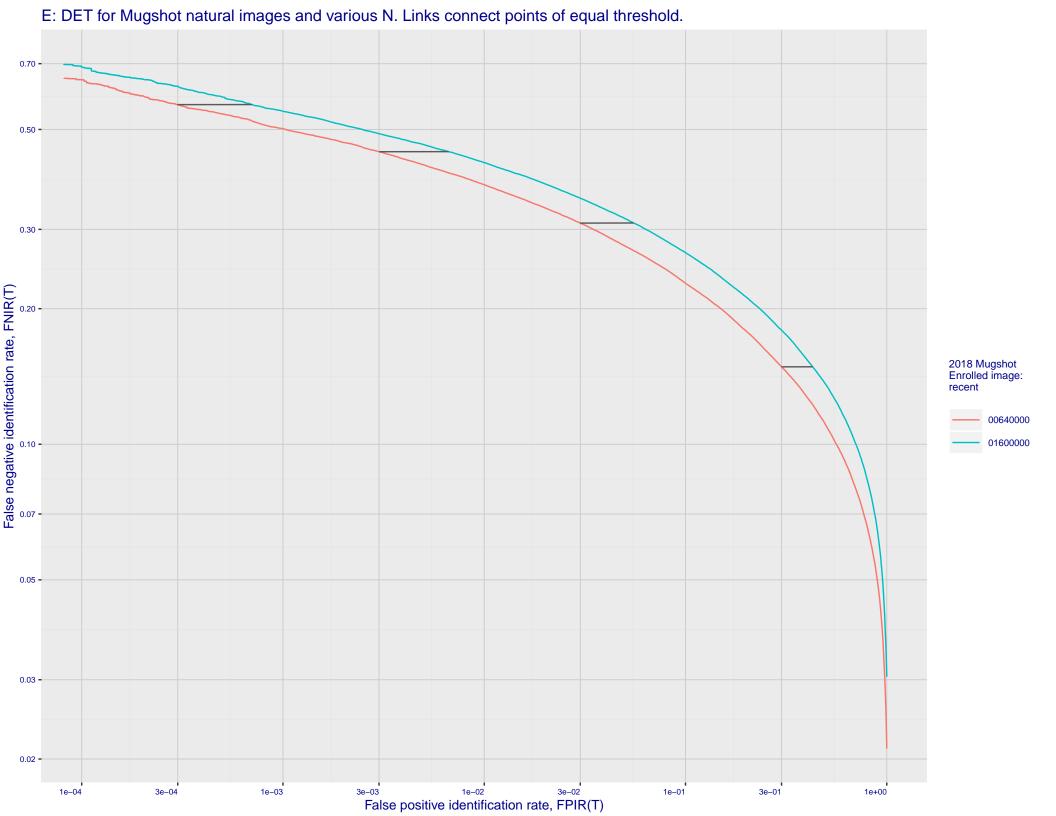
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

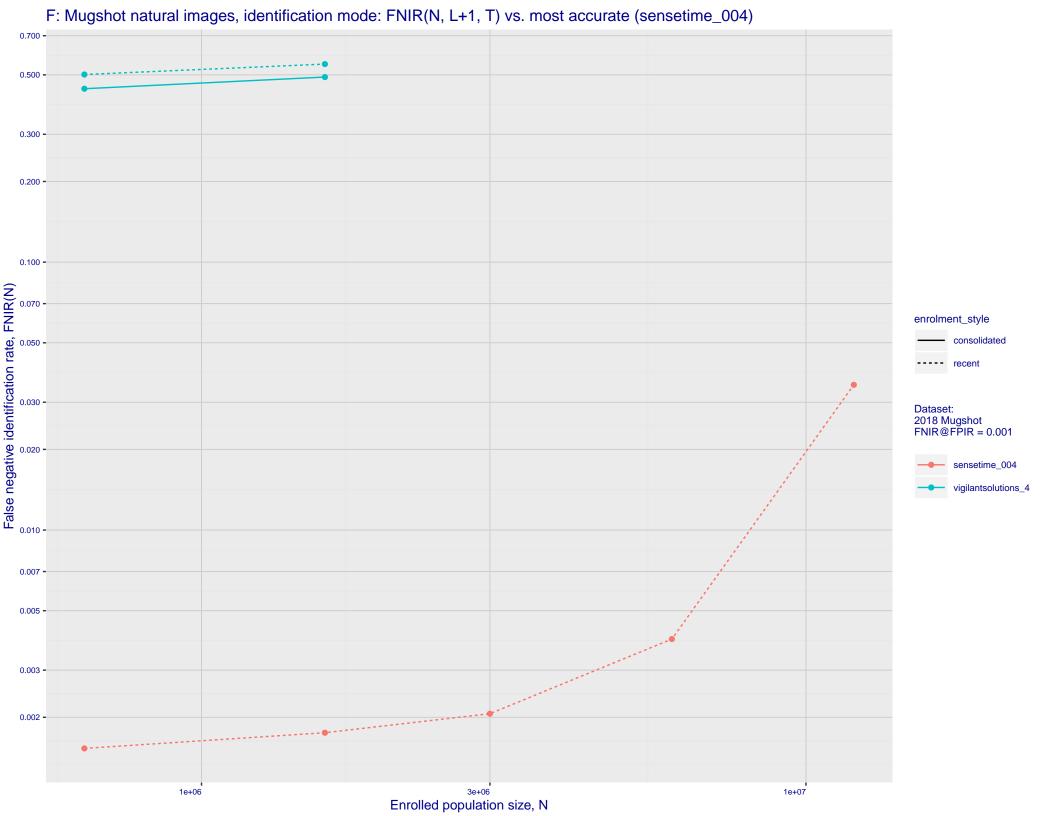




C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 5e+01 3e+01 2e+01 -1e+01 7e+00 · 5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -Enrolled images: recent N = 1600000 7e-02 - 7e-02 - 7e-03 Mugshot natural Mugshot profile Mugshot webcam 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 1e-04 3e-04 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)







## G: Datasheet

Algorithm: vigilantsolutions\_4

Developer: Vigilant Solutions

Submission Date: 2018\_06\_21

Template size: 1544 bytes

Template time (2.5 percentile): 807 msec

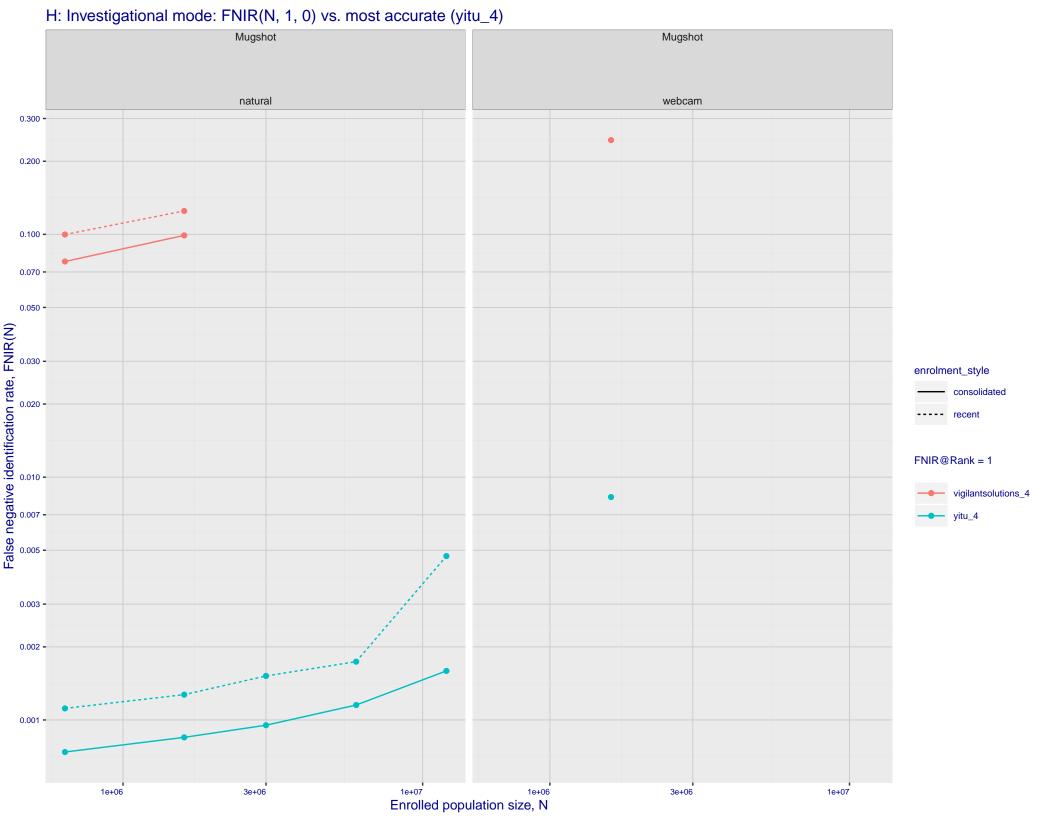
Template time (median): 812 msec

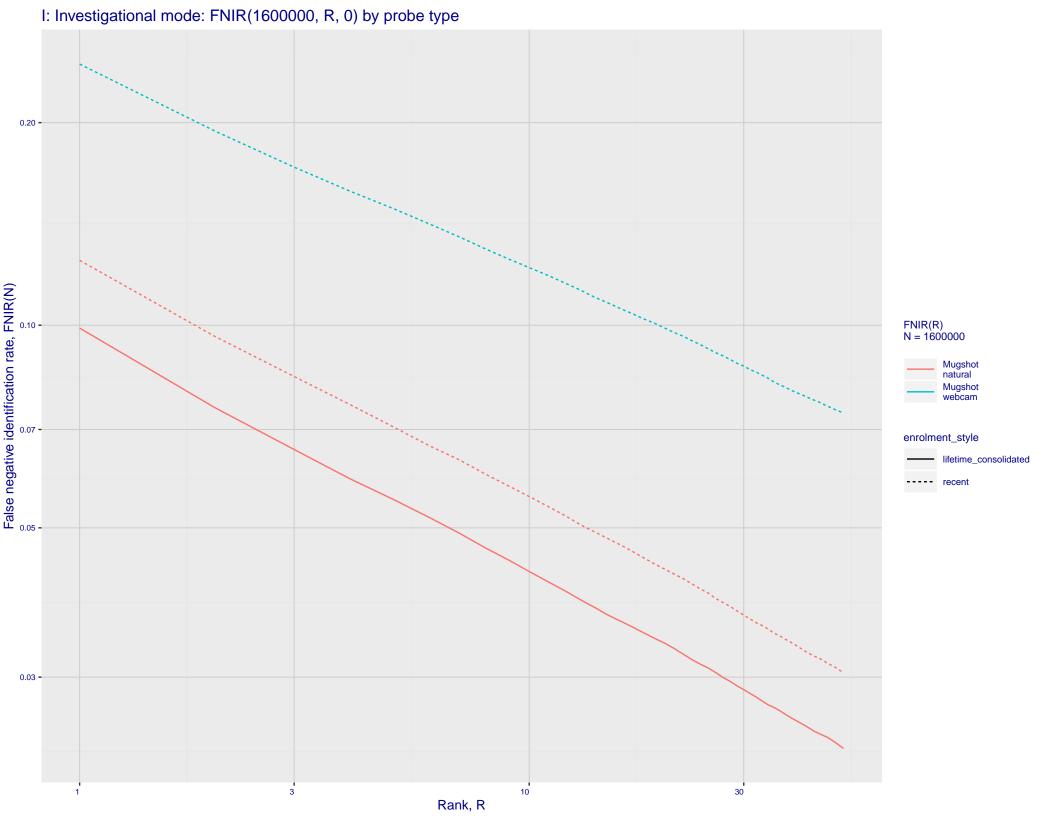
Template time (97.5 percentile): 888 msec

Frontal mugshot investigation rank 207 — FNIR(1600000, 0, 1) = 0.1249 vs. lowest 0.0010 from sensetime\_004 natural investigation rank 184 — FNIR(1600000, 0, 1) = 0.2444 vs. lowest 0.0067 from sensetime\_003 natural investigation rank 235 — FNIR(1600000, 0, 1) = 0.9195 vs. lowest 0.0492 from paravision\_005 natural investigation rank 235 — FNIR(1600000, 0, 1) = 0.9195 vs. lowest 0.0492 from paravision\_005

Frontal mugshot identification rank 212 — FNIR(1600000, T, L+1) = 0.5485 vs. lowest 0.0018 from sensetime\_004 natural identification rank 191 — FNIR(1600000, T, L+1) = 0.8169 vs. lowest 0.0122 from sensetime\_003

natural identification rank 108 -- FNIR(1600000, T, L+1) = 0.9966 vs. lowest 0.1020 from sensetime\_004





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

