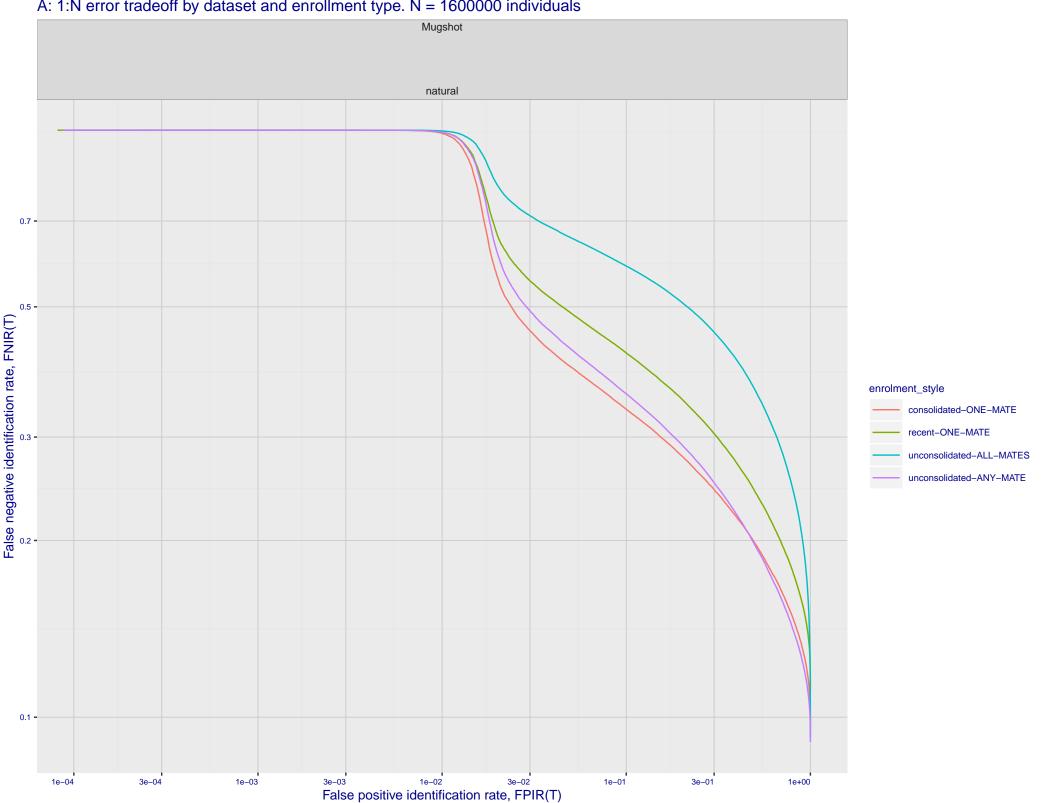
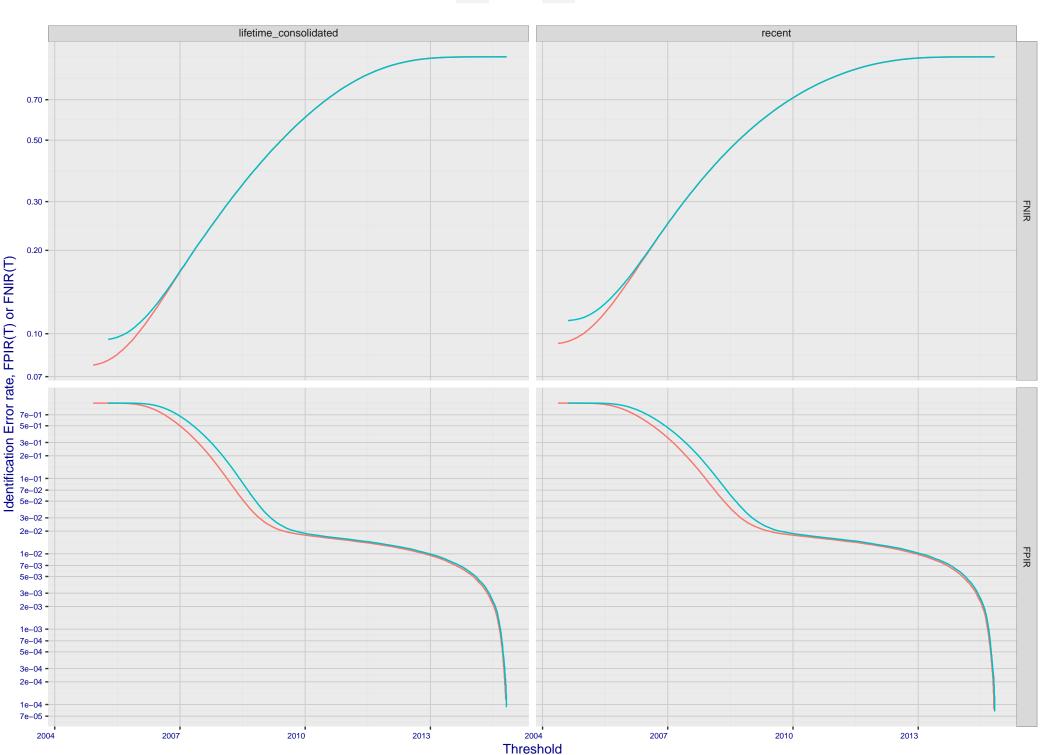
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals

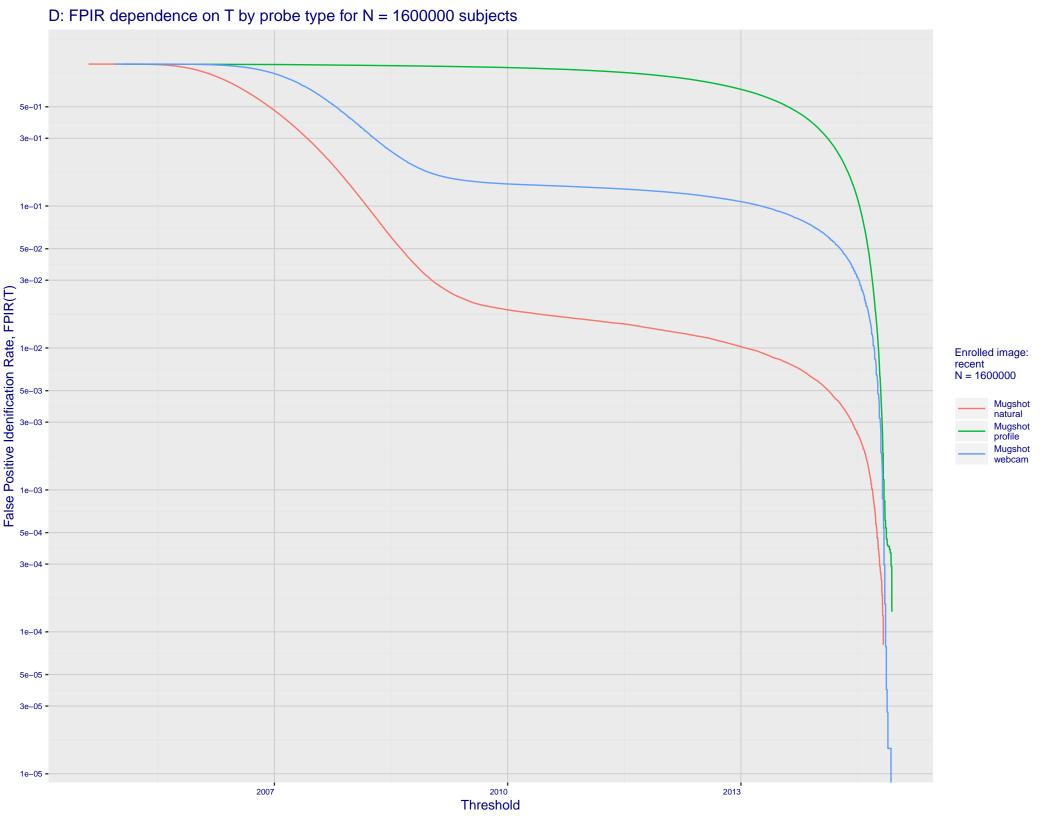


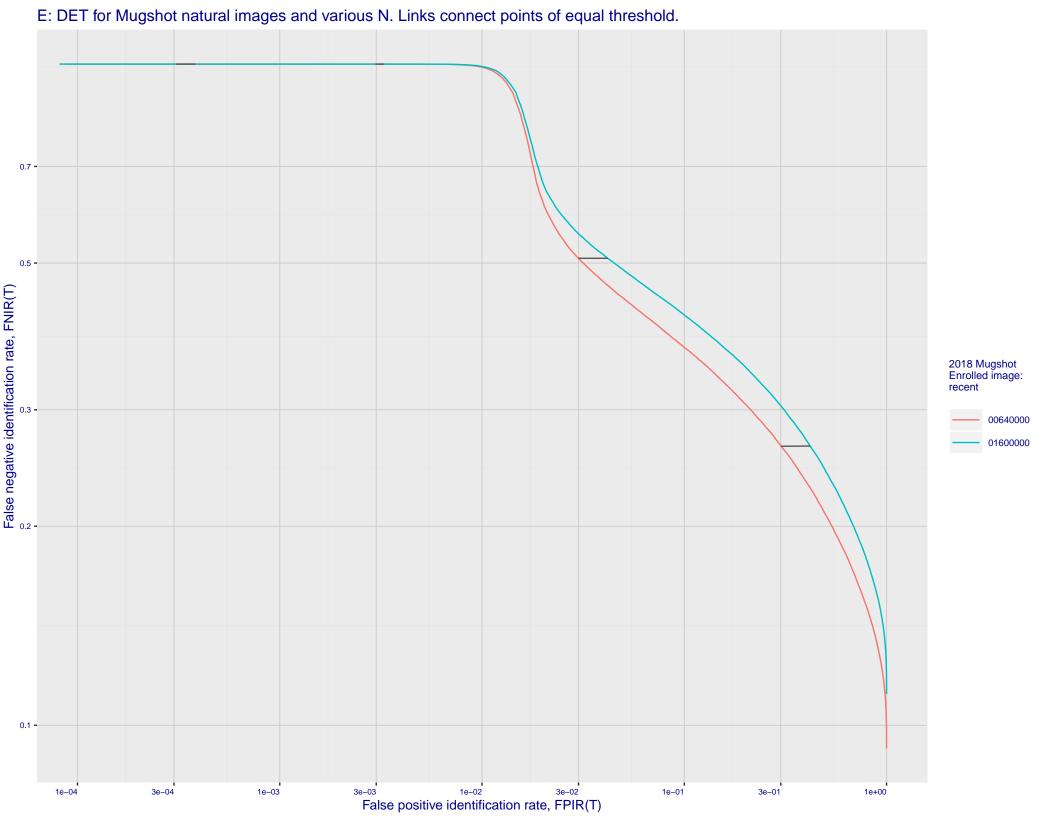
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

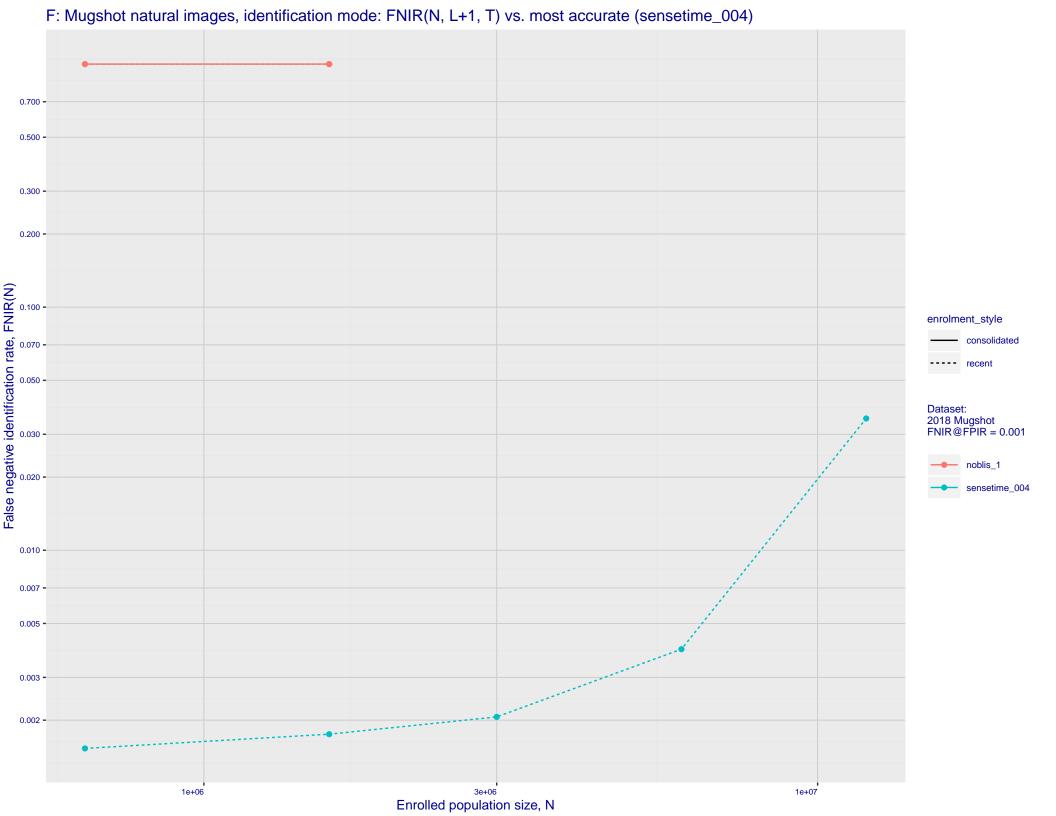




C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 5e+01 3e+01 2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 Enrolled images: recent N = 1600000 7e-02 -5e-02 -S 3e-02 - 1e-02 -Mugshot natural Mugshot profile Mugshot 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 -3e-03 3e-02 1e-05 3e-05 1e-04 3e-04 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)







## G: Datasheet

Algorithm: noblis\_1

Developer: Noblis

Submission Date: 2018\_10\_30

Template size: 2048 bytes

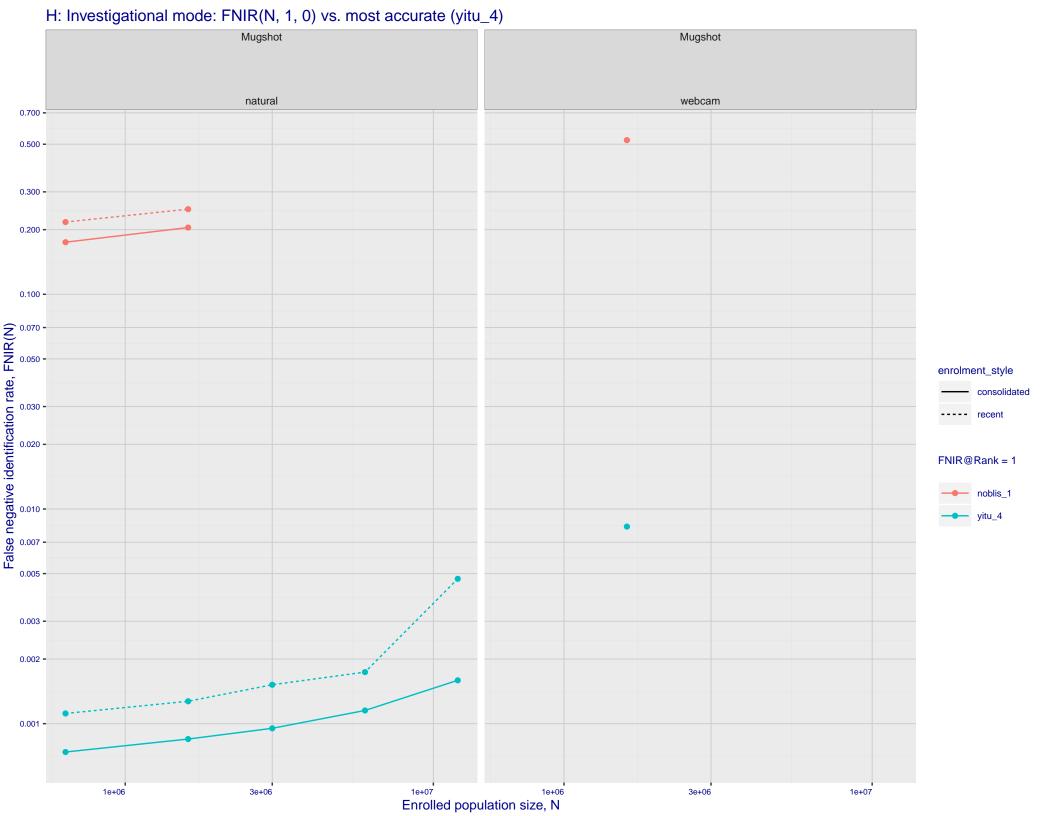
Template time (2.5 percentile): 197 msec

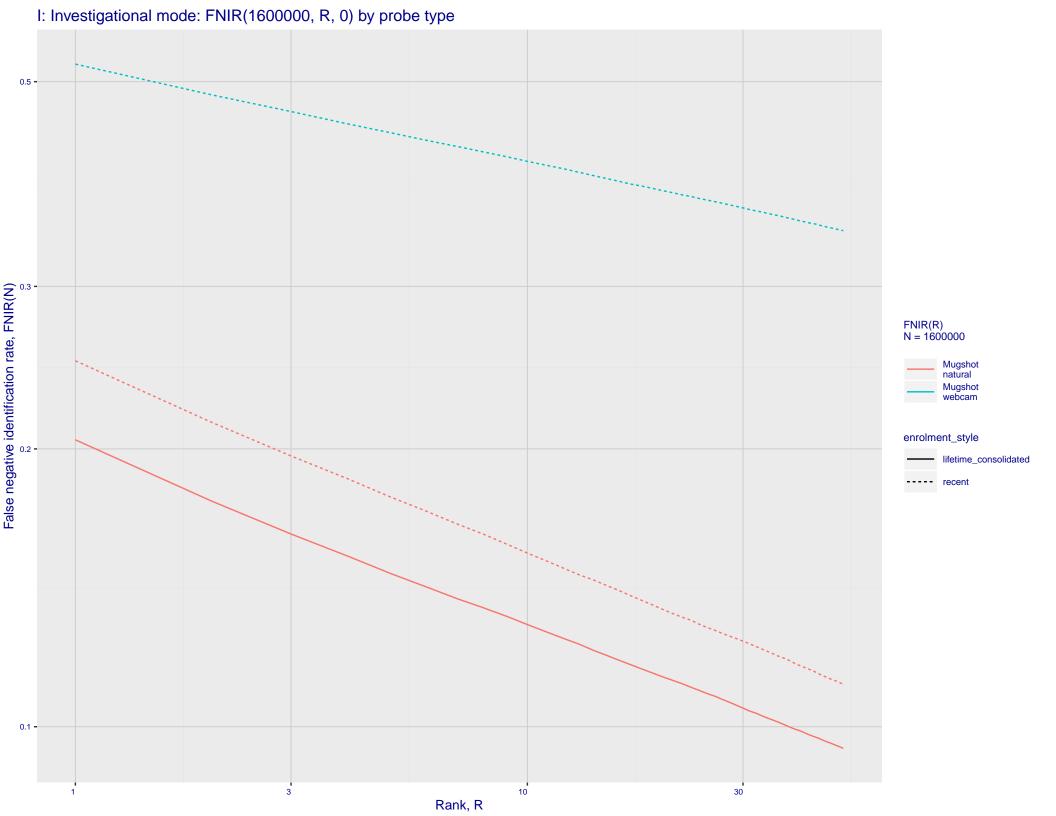
Template time (median): 207 msec

Template time (97.5 percentile): 230 msec

Frontal mugshot investigation rank 233 -- FNIR(1600000, 0, 1) = 0.2492 vs. lowest 0.0010 from sensetime\_004 natural investigation rank 201 -- FNIR(1600000, 0, 1) = 0.5224 vs. lowest 0.0067 from sensetime\_003 natural investigation rank 361 -- FNIR(1600000, 0, 1) = 0.9970 vs. lowest 0.0492 from paravision\_005 natural investigation rank 361 -- FNIR(1600000, 0, 1) = 0.9970 vs. lowest 0.0492 from paravision\_005

Frontal mugshot identification rank 250 -- FNIR(1600000, T, L+1) = 0.9996 vs. lowest 0.018 from sensetime\_004 natural identification rank 210 -- FNIR(1600000, T, L+1) = 1.0000 vs. lowest 0.0122 from sensetime\_003 natural identification rank 165 -- FNIR(1600000, T, L+1) = 0.9999 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 - Log Model ---- Power Law Model 1000 -700 -500 -300 -200 -1e+06 7e+05 8e+05 Enrolled population size, N, one image per person

Search Duration (milliseconds)