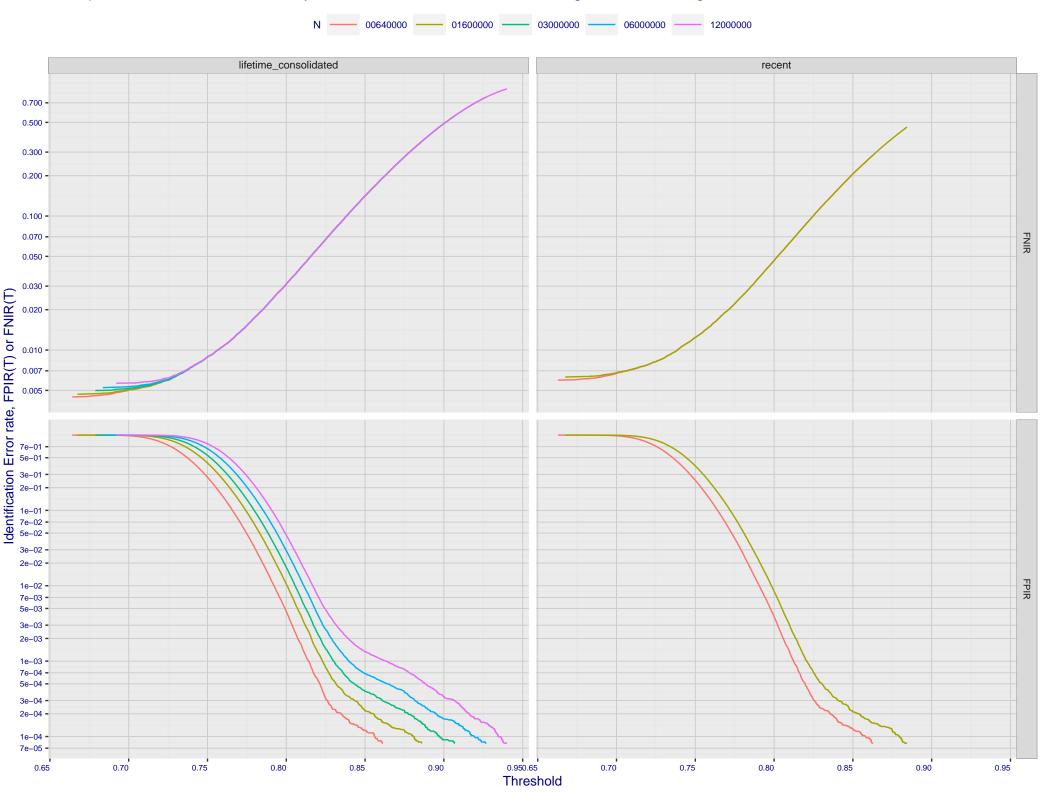
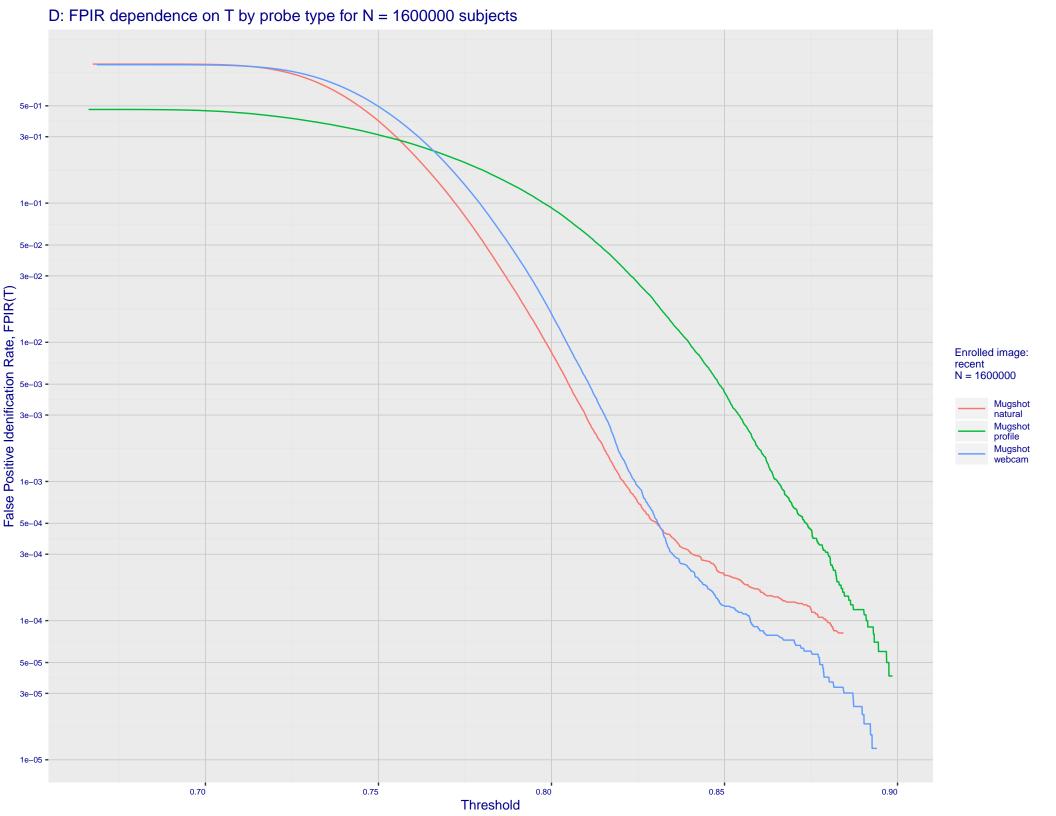
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Mugshot natural 0.500 0.300 0.200 -False negative identification rate, FNIR(T) enrolment_style consolidated-ONE-MATE recent-ONE-MATE 0.010 -0.007 0.005 -1e-03 3e-01 1e+00 1e-04

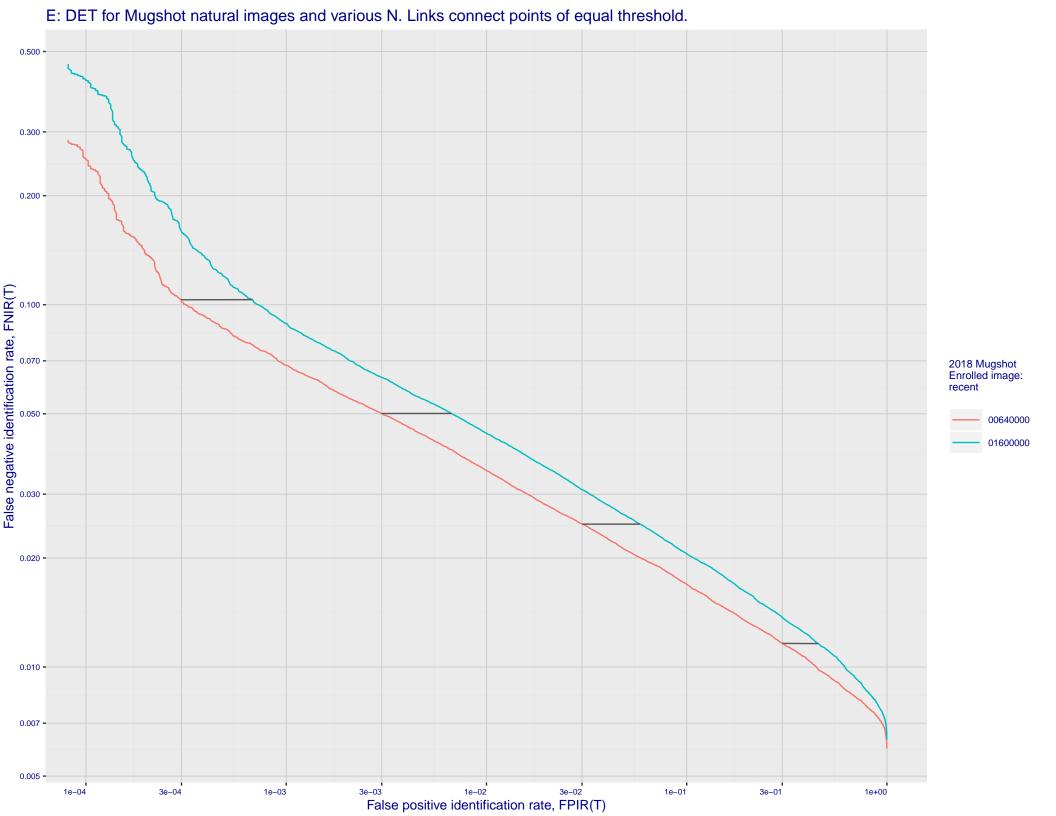
False positive identification rate, FPIR(T)

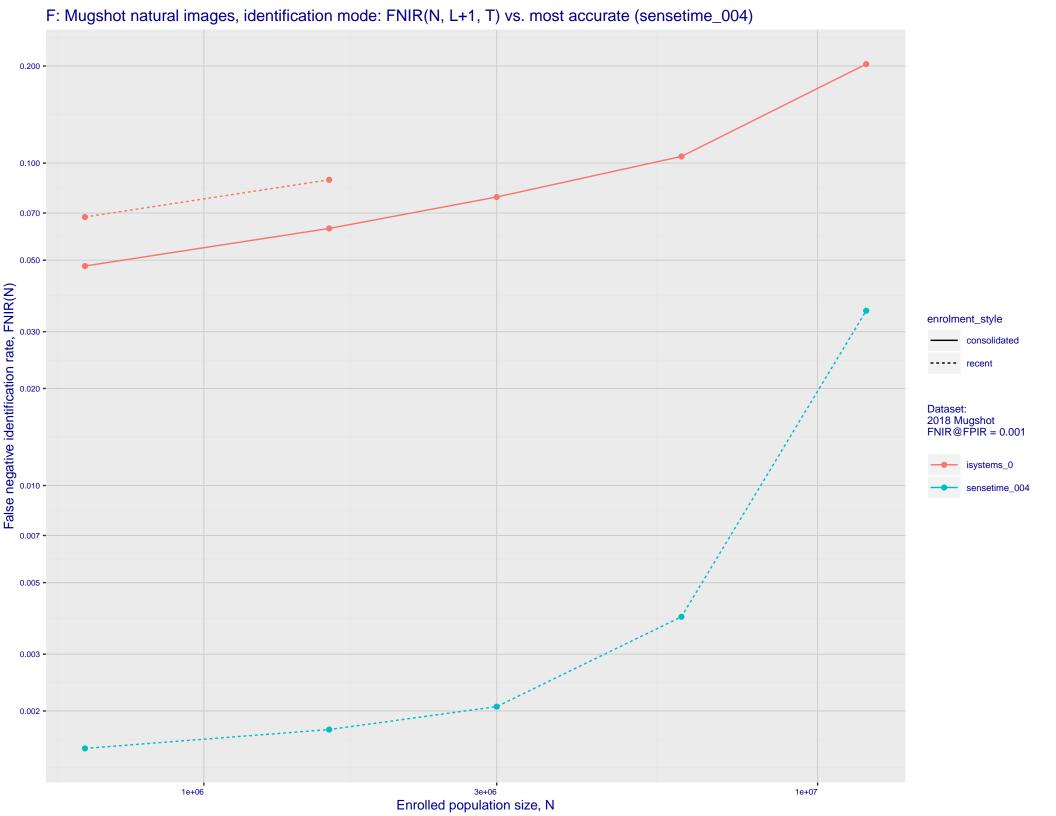
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



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 -5e-02 -S = 02 - 02 - 1e-02 - 1e-02 - 05 | 1e-02 - 0 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 1e-05 3e-05 1e-04 3e-04 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)







G: Datasheet

Algorithm: isystems_0

Developer: Alivia / Innovation Sys

Submission Date: 2018_02_14

Template size: 2048 bytes

Template time (2.5 percentile): 214 msec

Template time (median): 222 msec

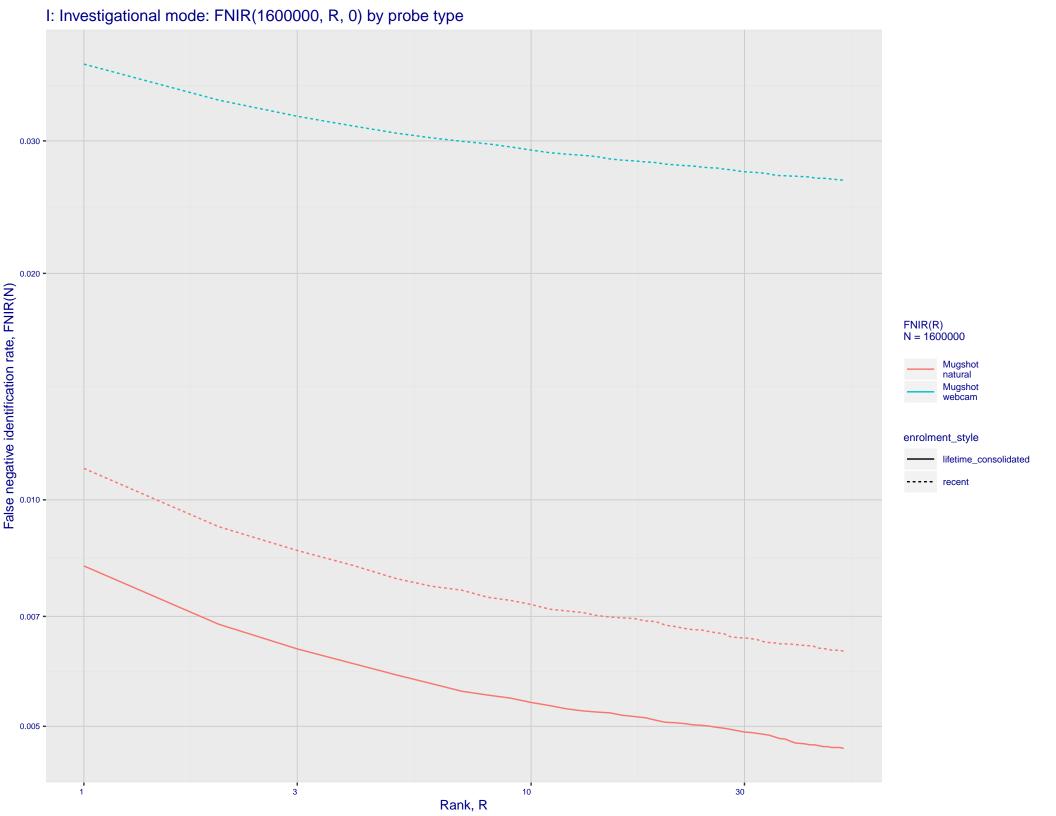
Template time (97.5 percentile): 237 msec

Frontal mugshot investigation rank 121 -- FNIR(1600000, 0, 1) = 0.0110 vs. lowest 0.0010 from sensetime_004 natural investigation rank 115 -- FNIR(1600000, 0, 1) = 0.0380 vs. lowest 0.0067 from sensetime_003 natural investigation rank 299 -- FNIR(1600000, 0, 1) = 0.9643 vs. lowest 0.0492 from paravision_005 natural investigation rank 299 -- FNIR(1600000, 0, 1) = 0.9643 vs. lowest 0.0492 from paravision_005

Frontal mugshot identification rank 116 -- FNIR(1600000, T, L+1) = 0.0887 vs. lowest 0.0018 from sensetime_004 natural identification rank 108 -- FNIR(1600000, T, L+1) = 0.1730 vs. lowest 0.0122 from sensetime_003

natural identification rank 91 -- FNIR(1600000, T, L+1) = 0.9922 vs. lowest 0.1020 from sensetime_004

H: Investigational mode: FNIR(N, 1, 0) vs. most accurate (yitu_4) Mugshot Mugshot natural webcam 0.030 0.020 -False negative identification rate, FNIR(N) enrolment_style consolidated ---- recent FNIR@Rank = 1 isystems_0 yitu_4 0.002 -0.001 1e+06 3e+06 3e+06 Enrolled population size, N



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

