A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Mugshot natural 0.70 -0.50 -0.30 -False negative identification rate, FNIR(T) enrolment_style consolidated-ONE-MATE recent-ONE-MATE 0.03 -0.02 -

False positive identification rate, FPIR(T)

1e-01

3e-01

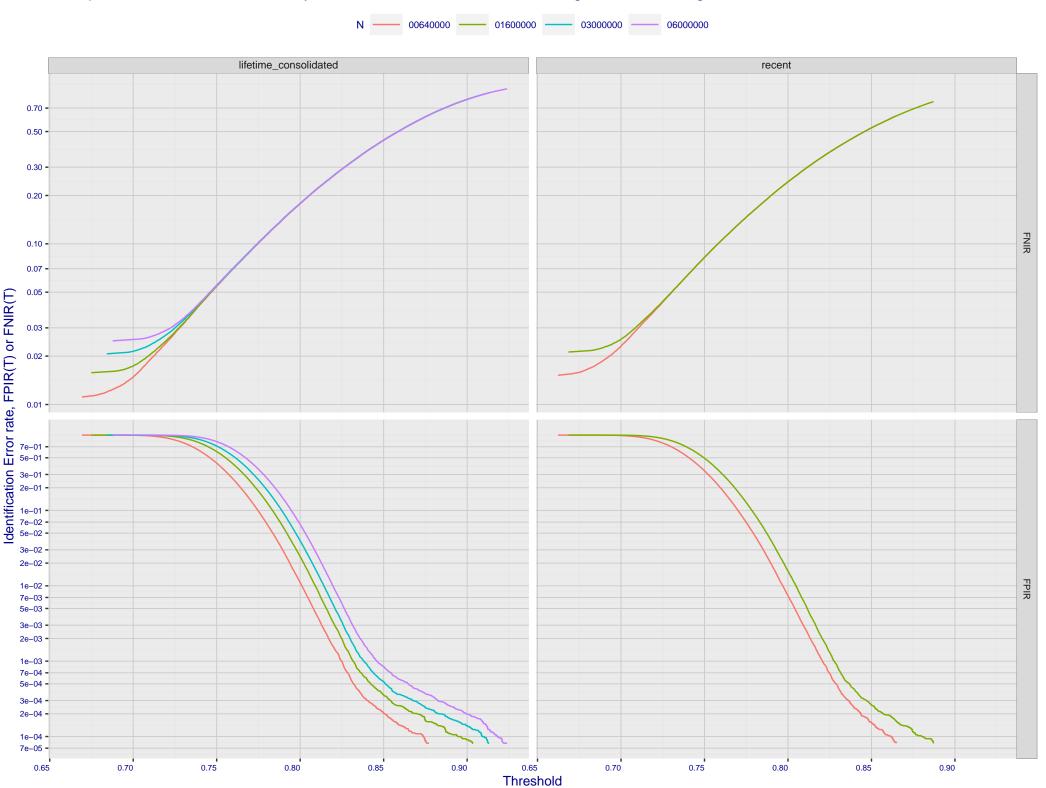
1e+00

1e-04

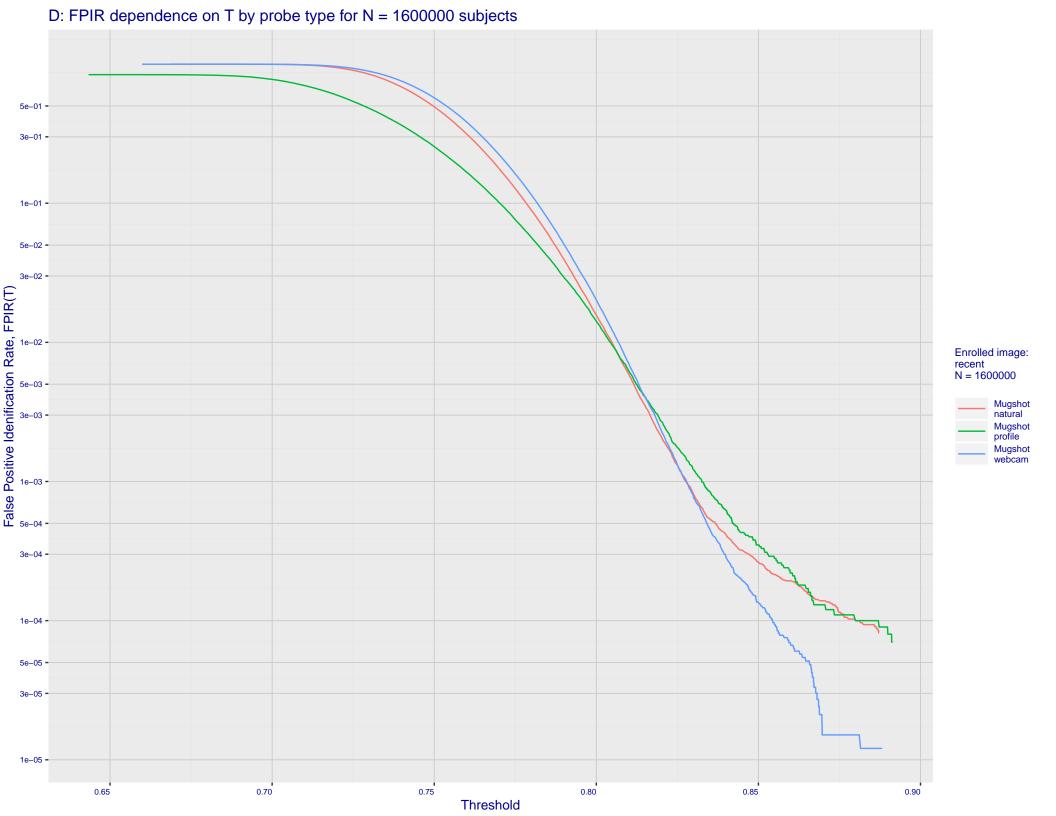
3e-04

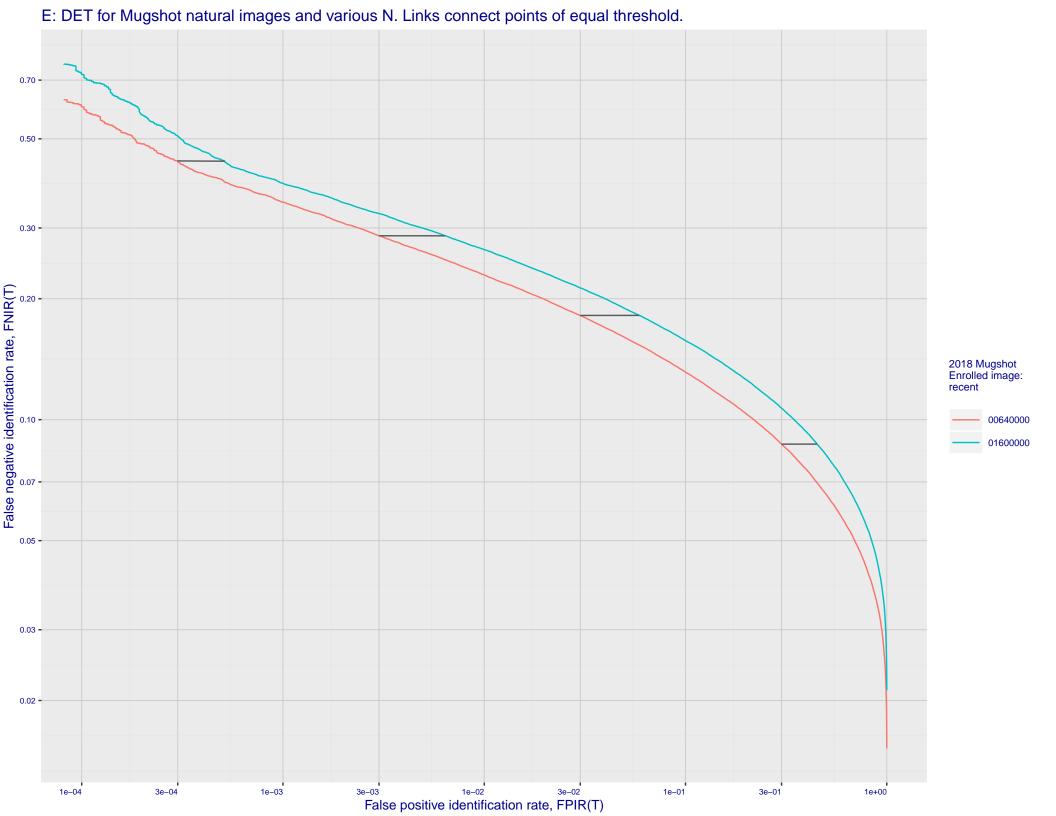
1e-03

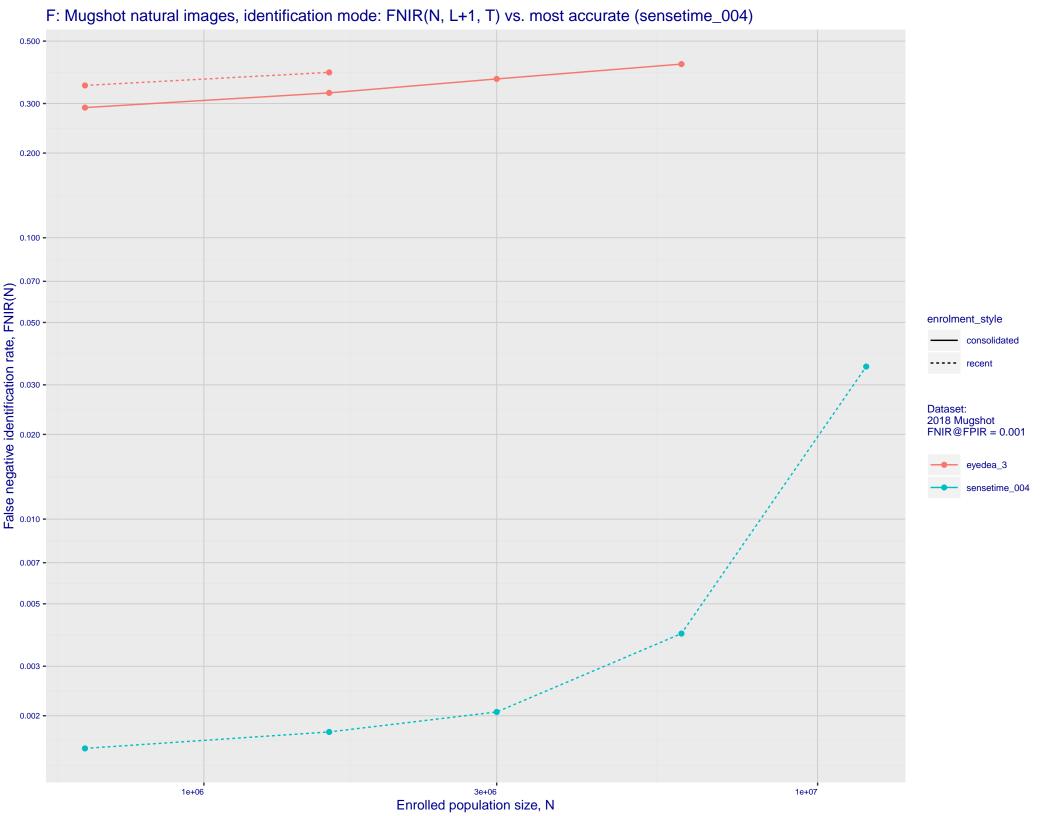
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



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 1e-05 3e-05 1e-04 3e-04 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)







G: Datasheet

Algorithm: eyedea_3

Developer: Eyedea Recognition Submission Date: 2018_06_18

Template size: 1036 bytes

Template time (2.5 percentile): 351 msec

Template time (median): 383 msec

Template time (97.5 percentile): 434 msec

Frontal mugshot investigation rank 202 — FNIR(1600000, 0, 1) = 0.0800 vs. lowest 0.0010 from sensetime_004

natural investigation rank 173 — FNIR(1600000, 0, 1) = 0.1479 vs. lowest 0.0067 from sensetime_003

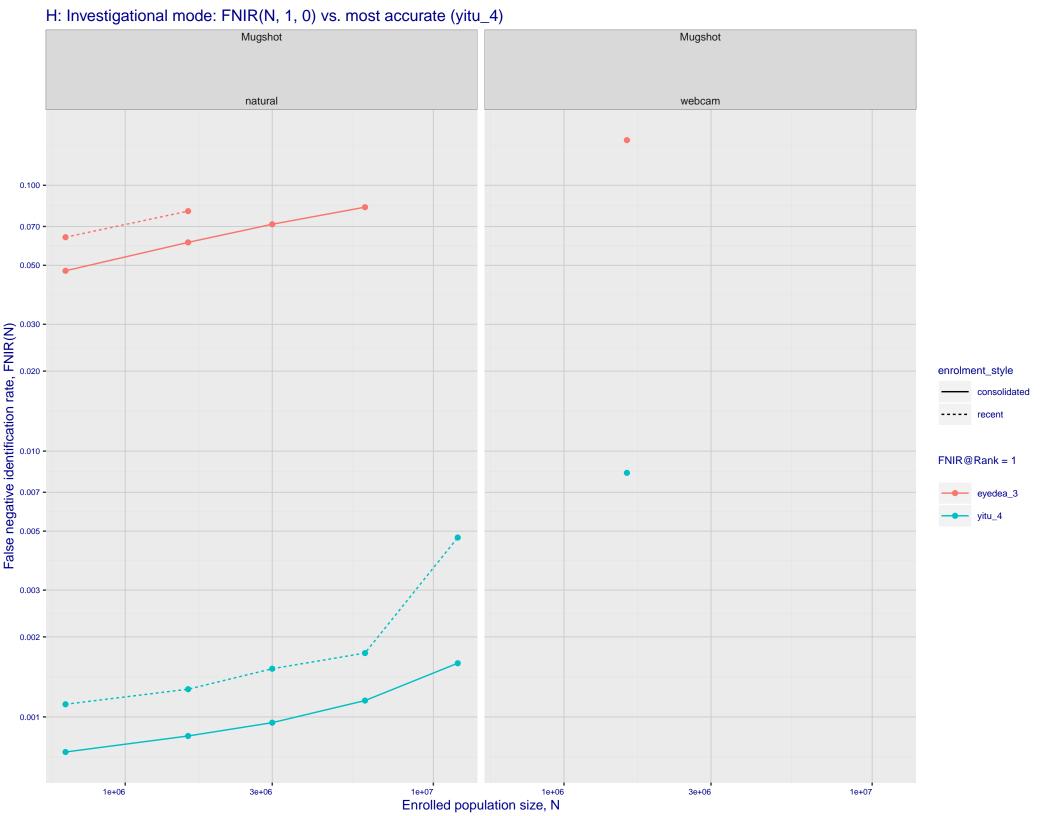
natural investigation rank 223 -- FNIR(1600000, 0, 1) = 0.8995 vs. lowest 0.0492 from paravision_005

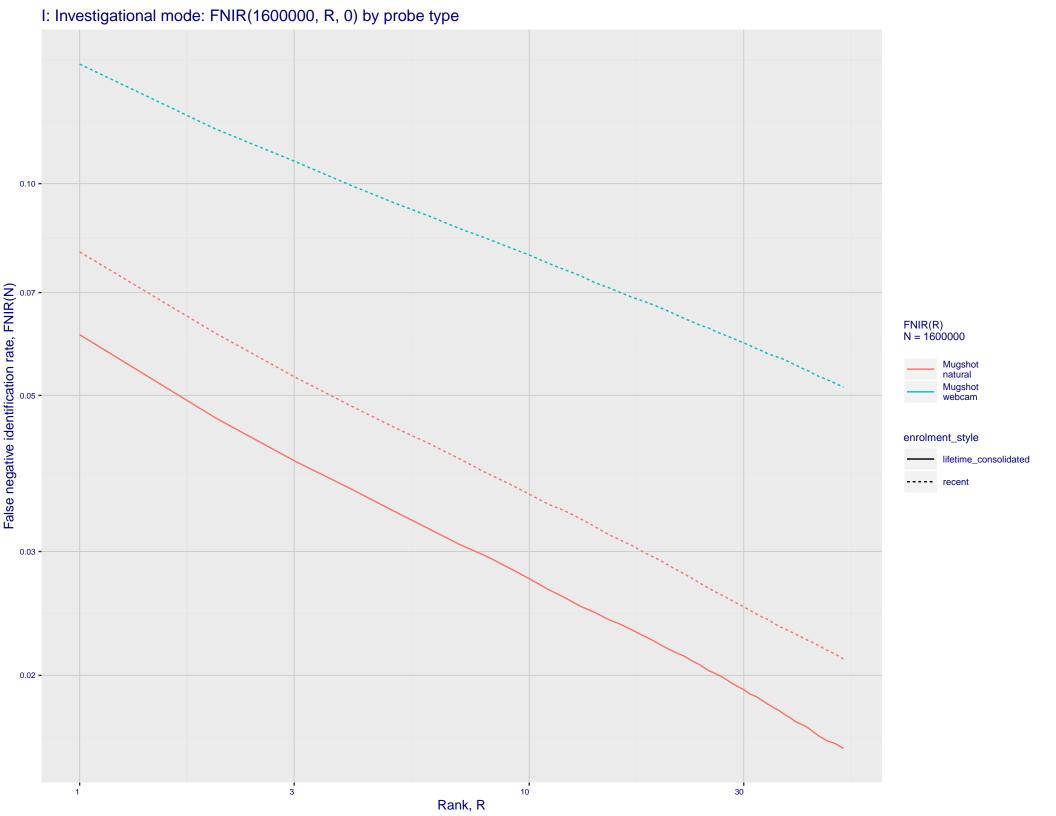
natural investigation rank 223 — FNIR(1600000, 0, 1) = 0.8995 vs. lowest 0.0492 from paravision_005

Frontal mugshot identification rank 195 — FNIR(1600000, T, L+1) = 0.3871 vs. lowest 0.0018 from sensetime_004

natural identification rank 172 -- FNIR(1600000, T, L+1) = 0.5426 vs. lowest 0.0122 from sensetime_003

natural identification rank 87 -- FNIR(1600000, T, L+1) = 0.9884 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

