A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Mugshot natural 0.7 -0.5 -False negative identification rate, FNIR(T) enrolment\_style recent-ONE-MATE 0.1 -

False positive identification rate, FPIR(T)

1e-01

3e-01

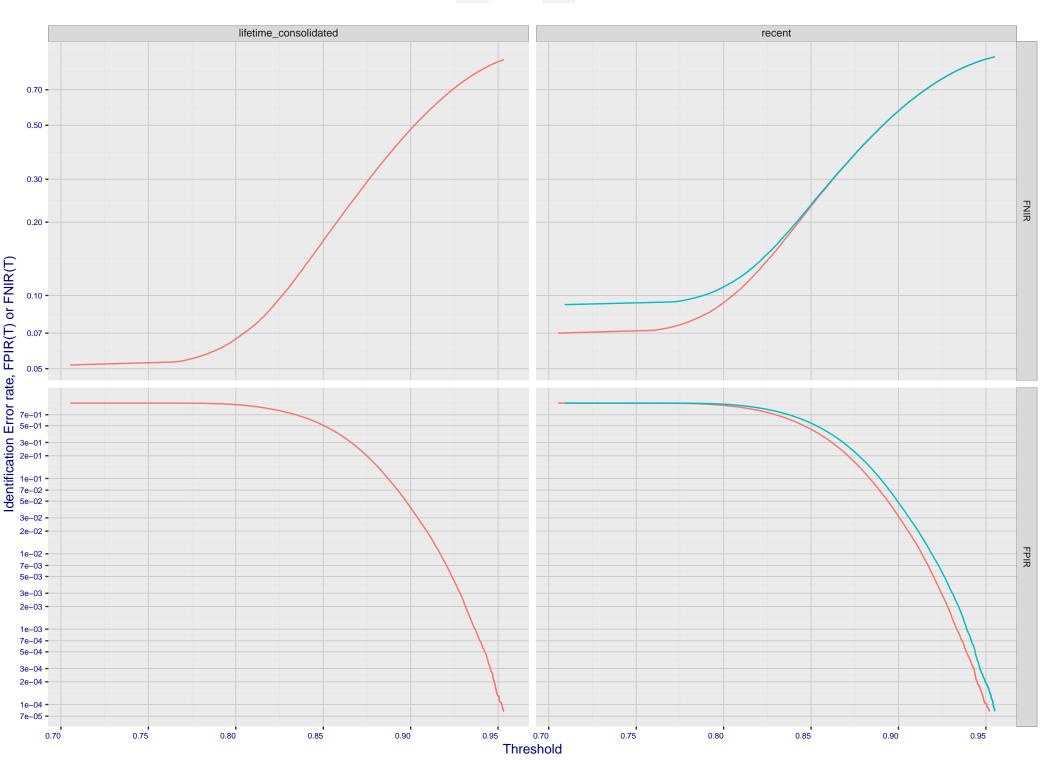
1e-04

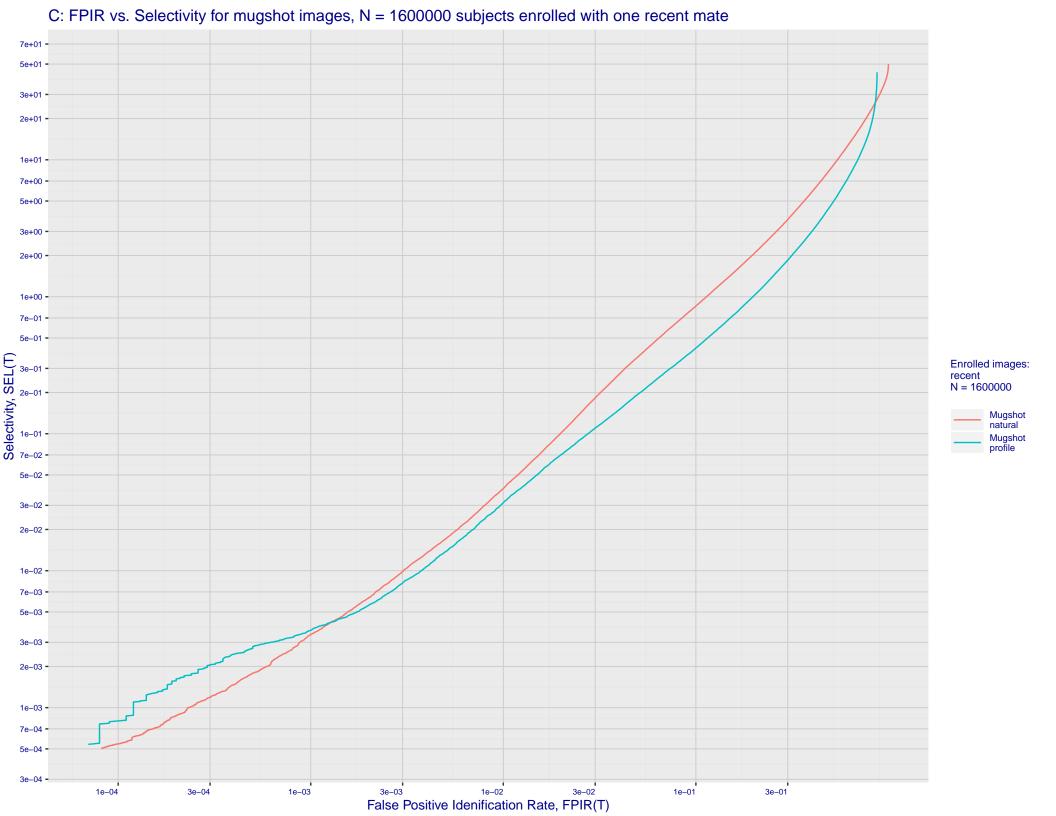
3e-04

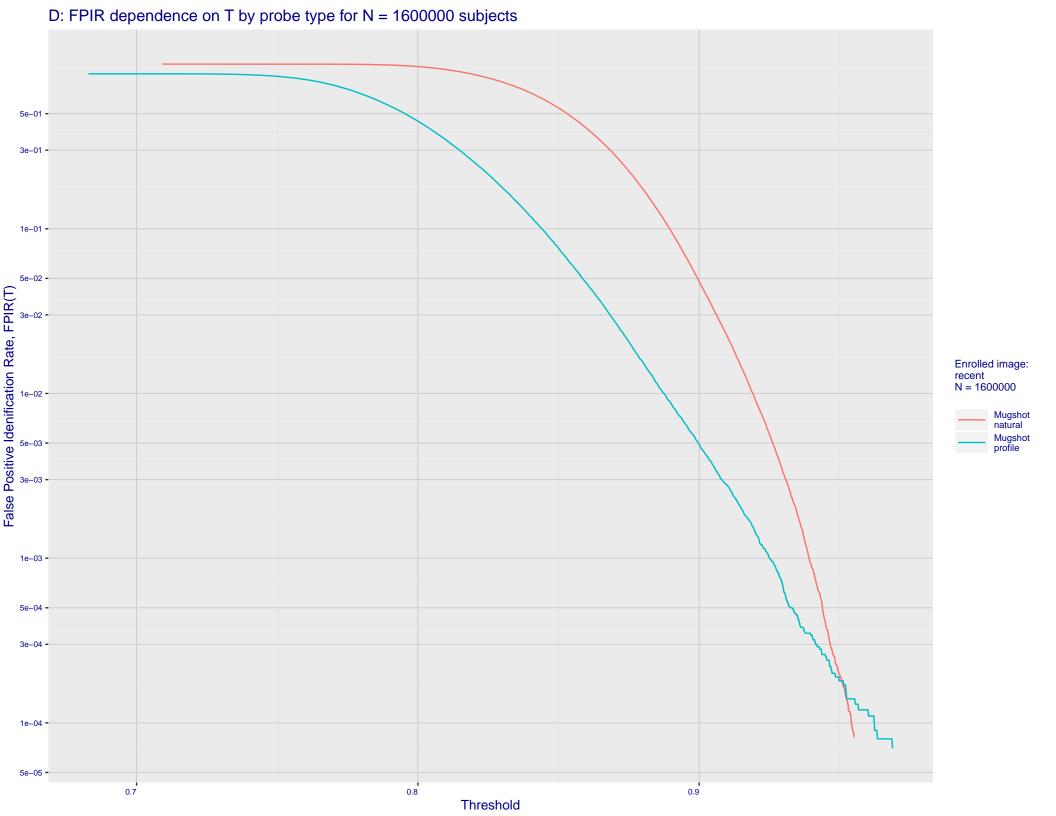
1e-03

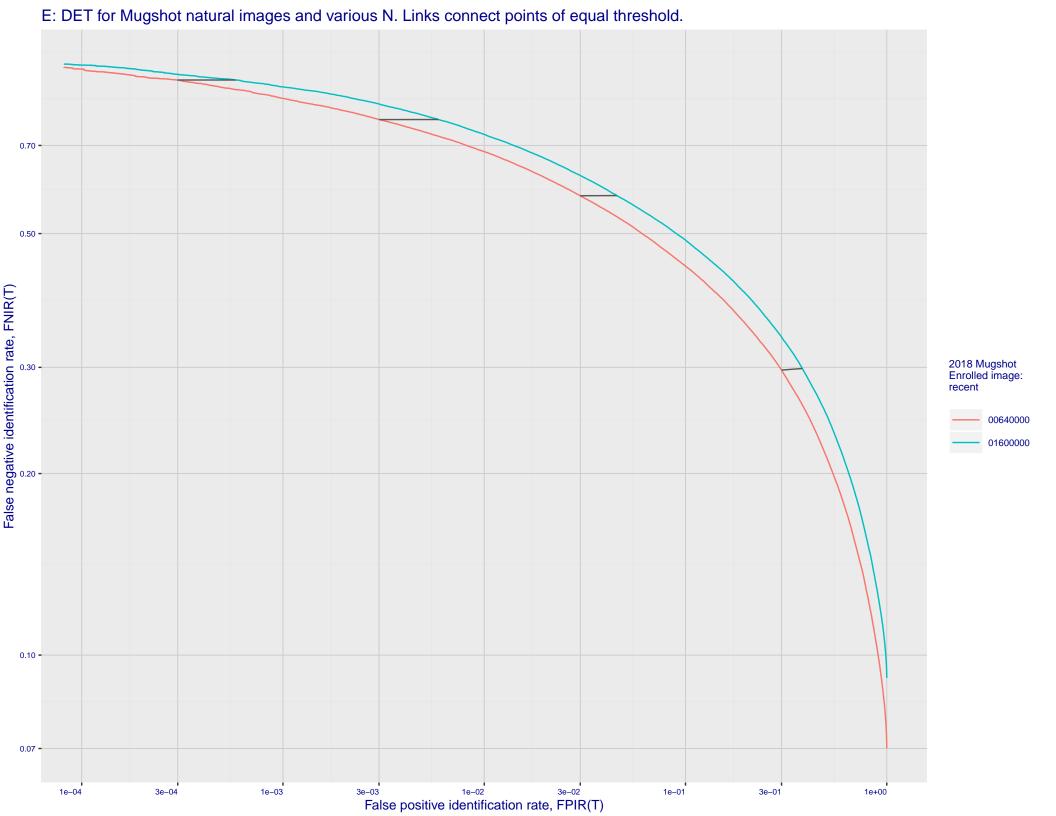
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

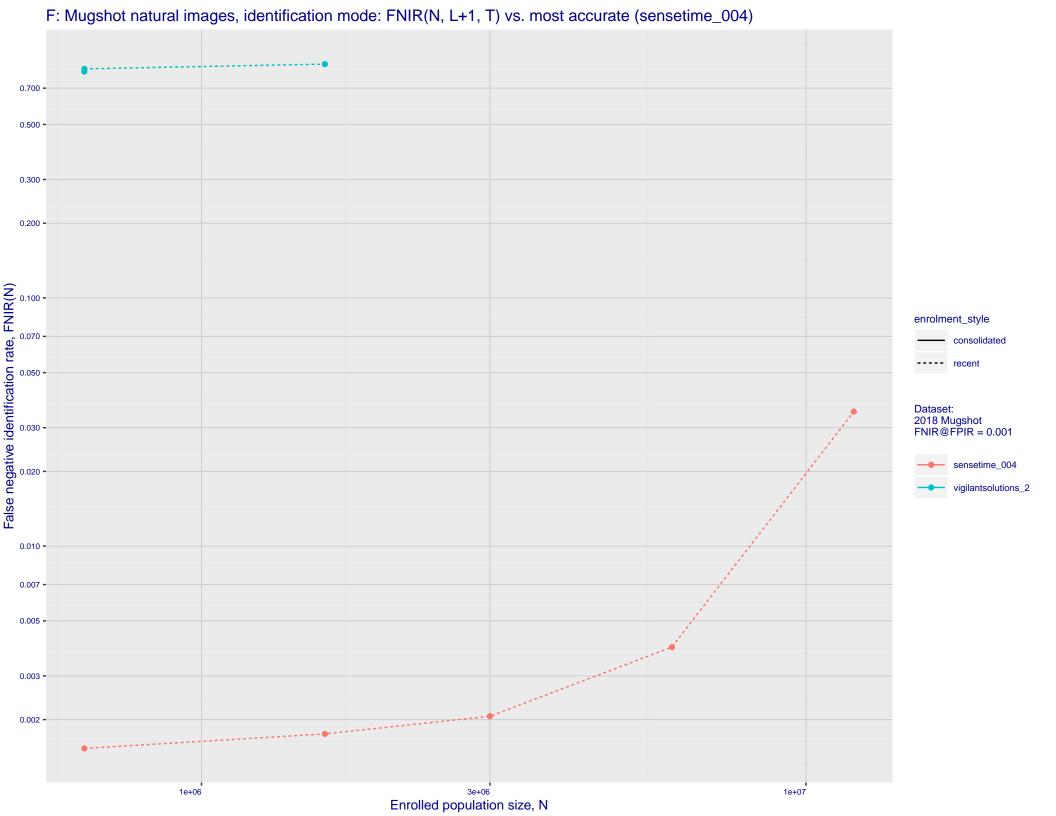












## G: Datasheet

Algorithm: vigilantsolutions\_2
Developer: Vigilant Solutions
Submission Date: 2018\_02\_14

Template size: 1544 bytes

Template time (2.5 percentile): 795 msec

Template time (median): 825 msec

Template time (97.5 percentile): 873 msec

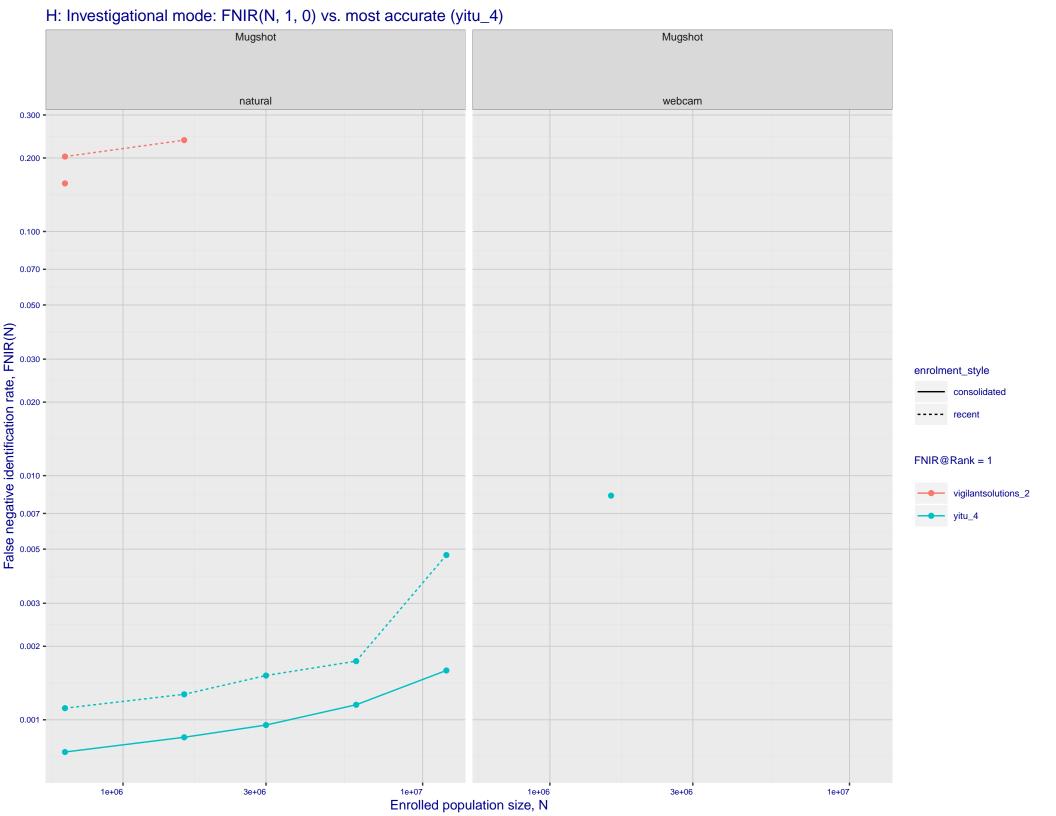
Frontal mugshot investigation rank 232 — FNIR(1600000, 0, 1) = 0.2366 vs. lowest 0.0010 from sensetime\_004

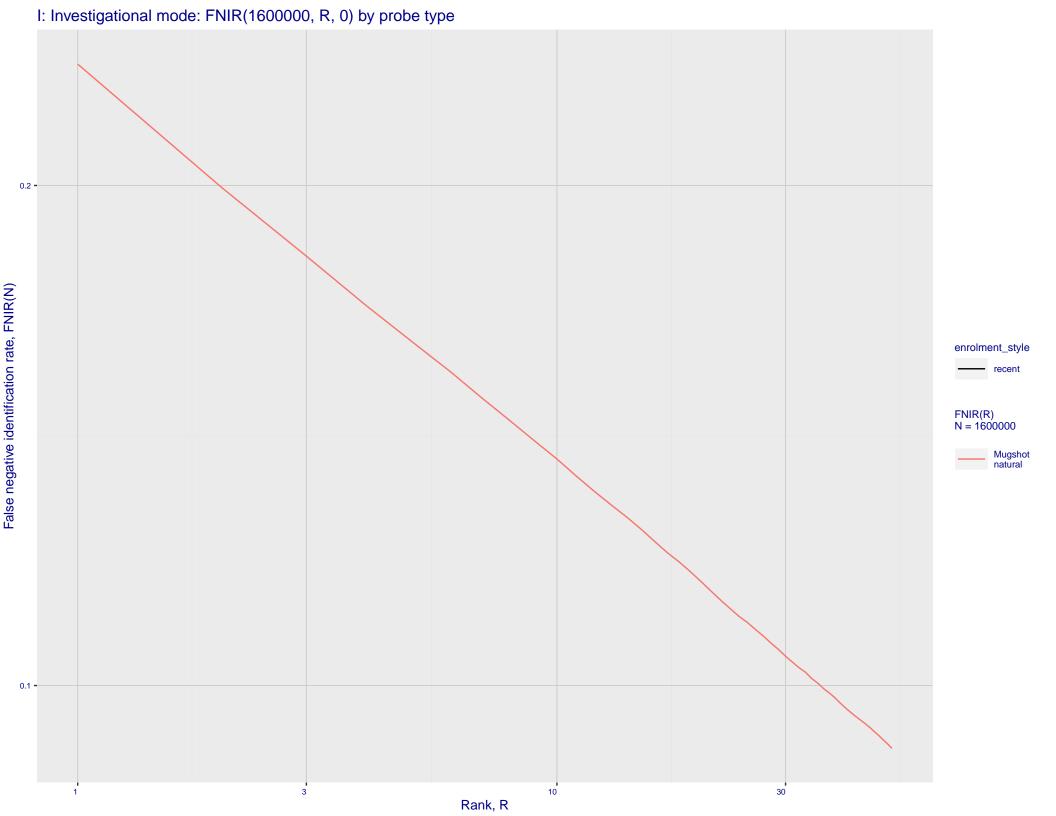
natural investigation rank 233 -- FNIR(1600000, 0, 1) = 0.9180 vs. lowest 0.0492 from paravision\_005

natural investigation rank 233 -- FNIR(1600000, 0, 1) = 0.9180 vs. lowest 0.0492 from paravision\_005

Frontal mugshot identification rank 235 -- FNIR(1600000, T, L+1) = 0.8753 vs. lowest 0.0018 from sensetime\_004

natural identification rank 130 -- FNIR(1600000, T, L+1) = 0.9989 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

