A: Datasheet

Algorithm: vocord_2

Developer: Vocord

Submission Date: 2018_02_16

Template size: 2048 bytes

Template time (2.5 percentile): 621 msec

Template time (median): 631 msec

Template time (97.5 percentile): 662 msec

Investigation:

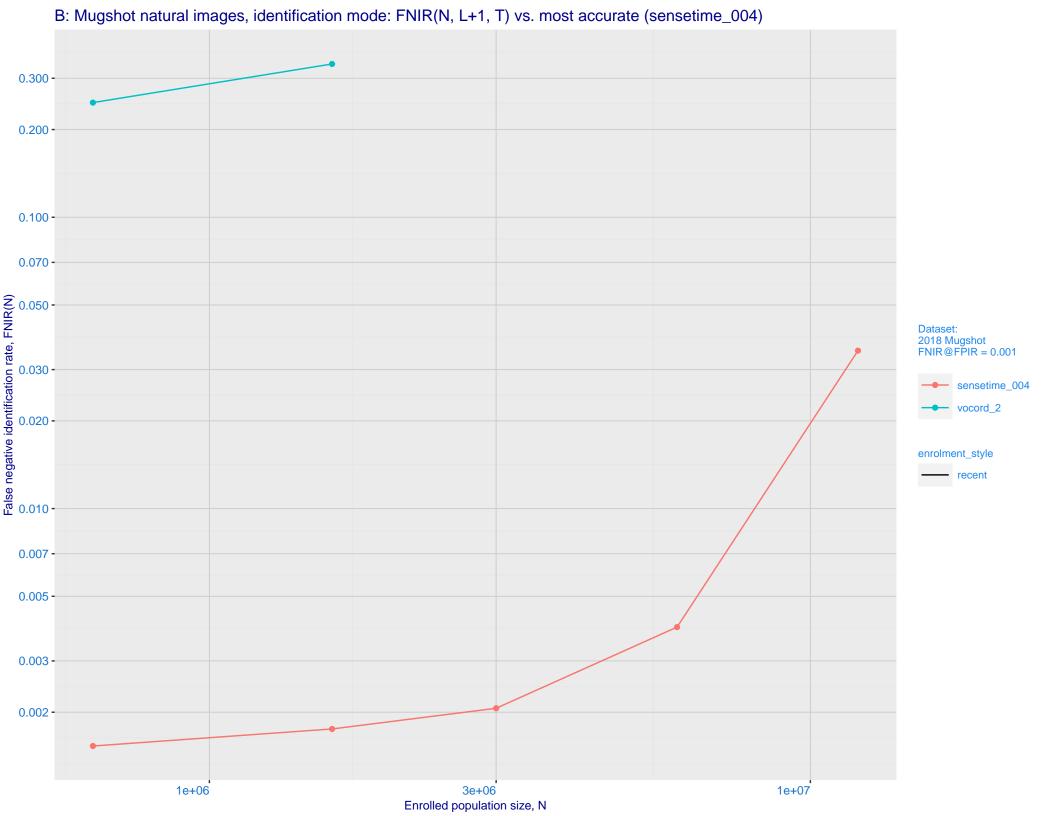
Frontal mugshot ranking 197 (out of 279) -- FNIR(1600000, 0, 1) = 0.0357 vs. lowest 0.0009 from sensetime_005

Mugshot profile ranking 134 (out of 210) -- FNIR(1600000, 0, 1) = 0.9293 vs. lowest 0.0587 from xforwardai_002

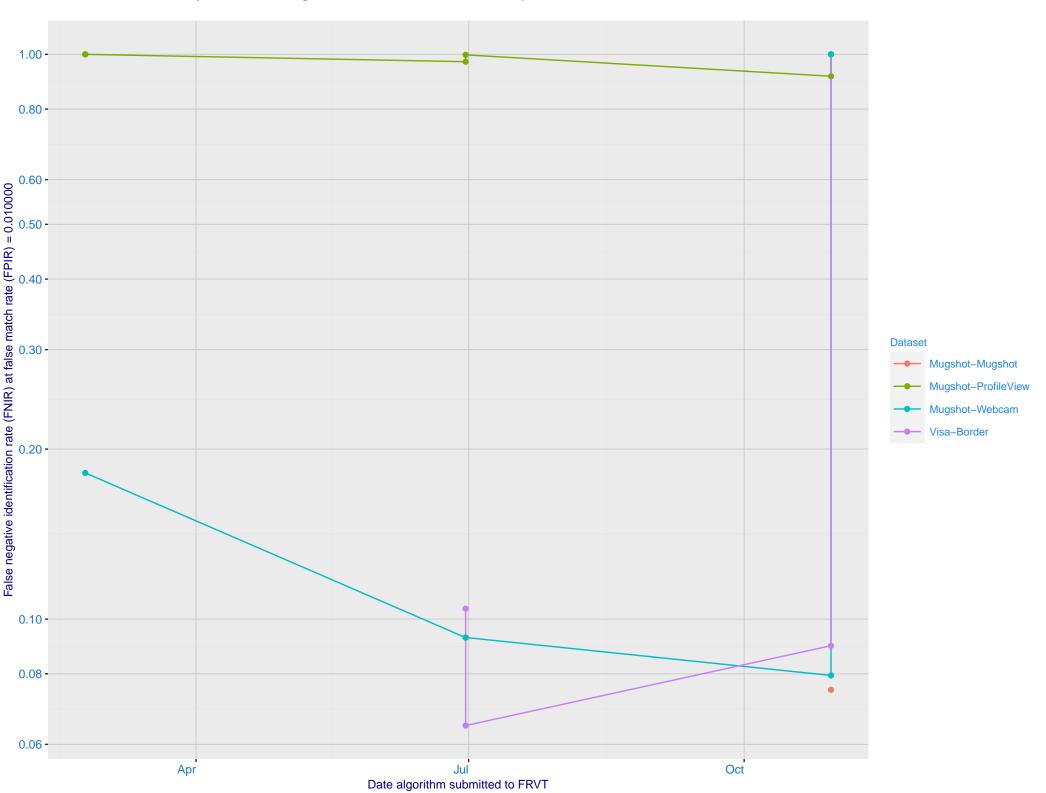
Identification:

Frontal mugshot ranking 211 (out of 279) -- FNIR(1600000, T, L+1) = 0.3359, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot profile ranking 187 (out of 209) -- FNIR(1600000, T, L+1) = 0.9999, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000



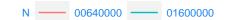
C: Evolution of accuracy for VOCORD algorithms on three datasets 2018 – present

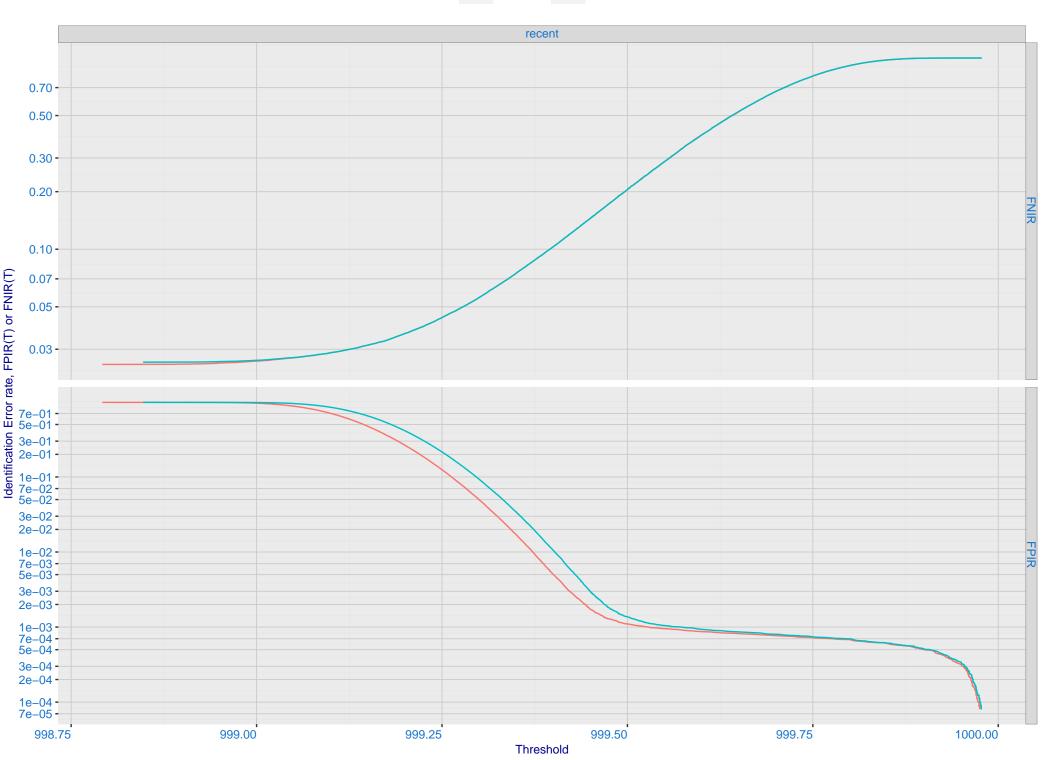


D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 sensetime_004 0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment_style random-ONE-MATE recent-ONE-MATE 0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -

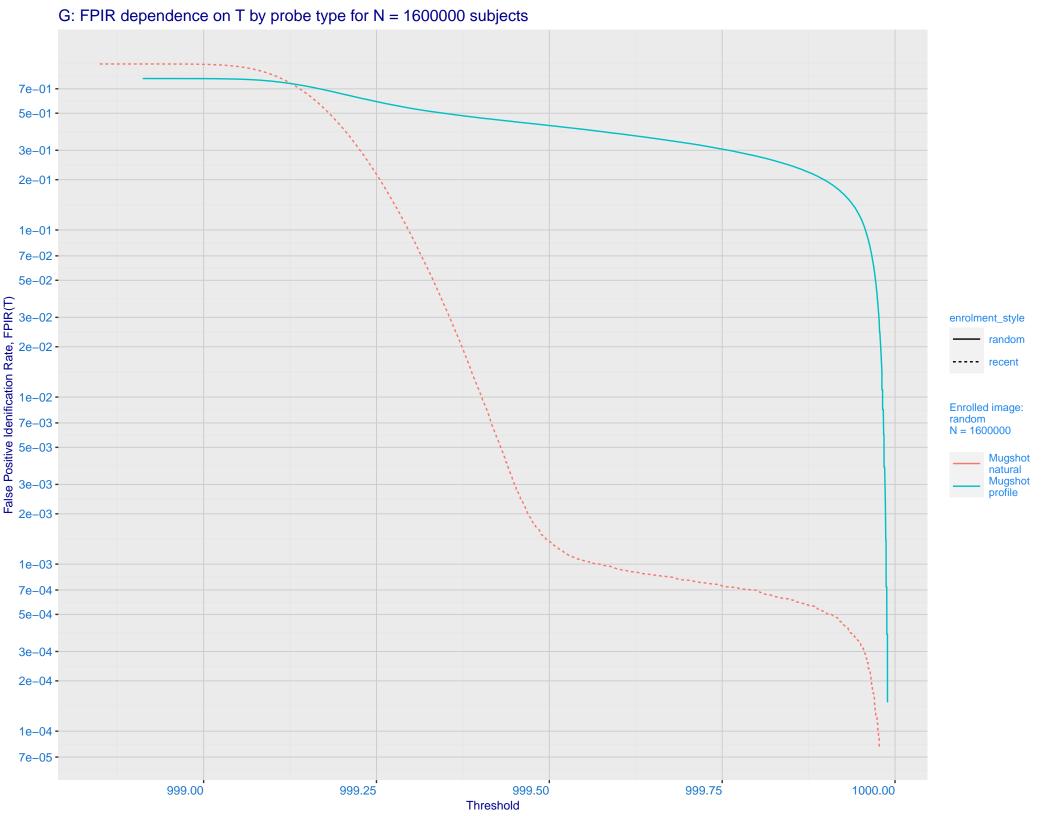
False positive identification rate, FPIR(T)

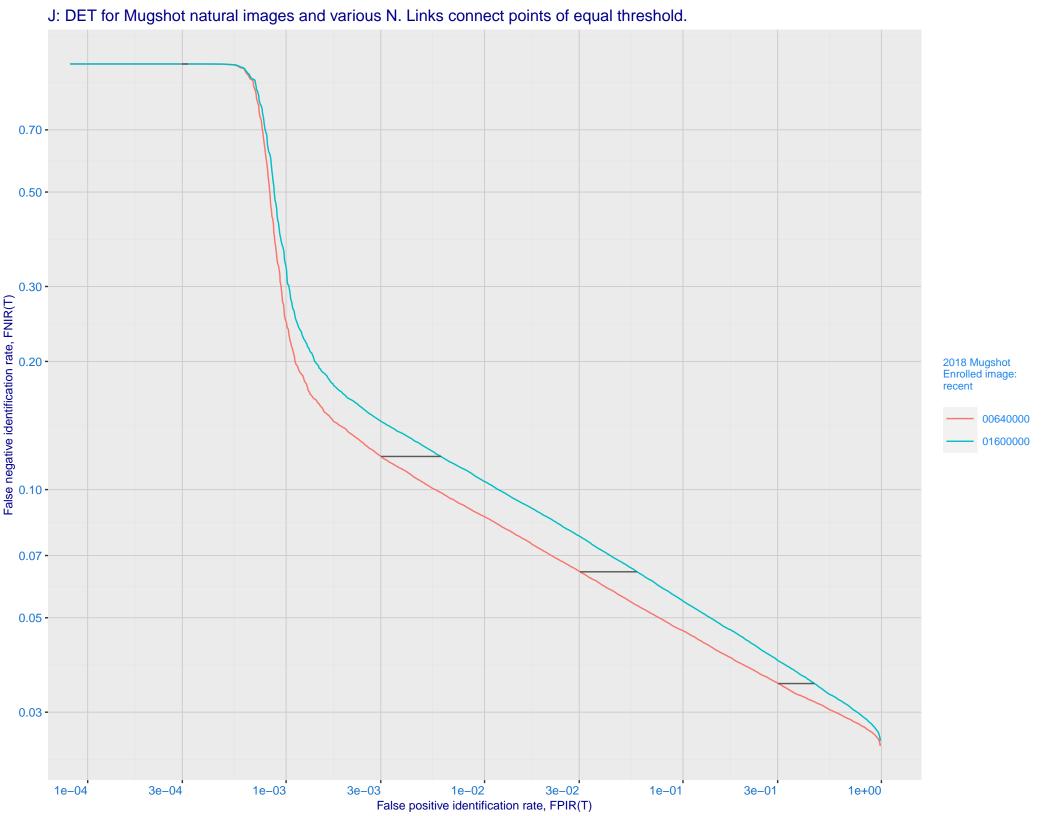
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



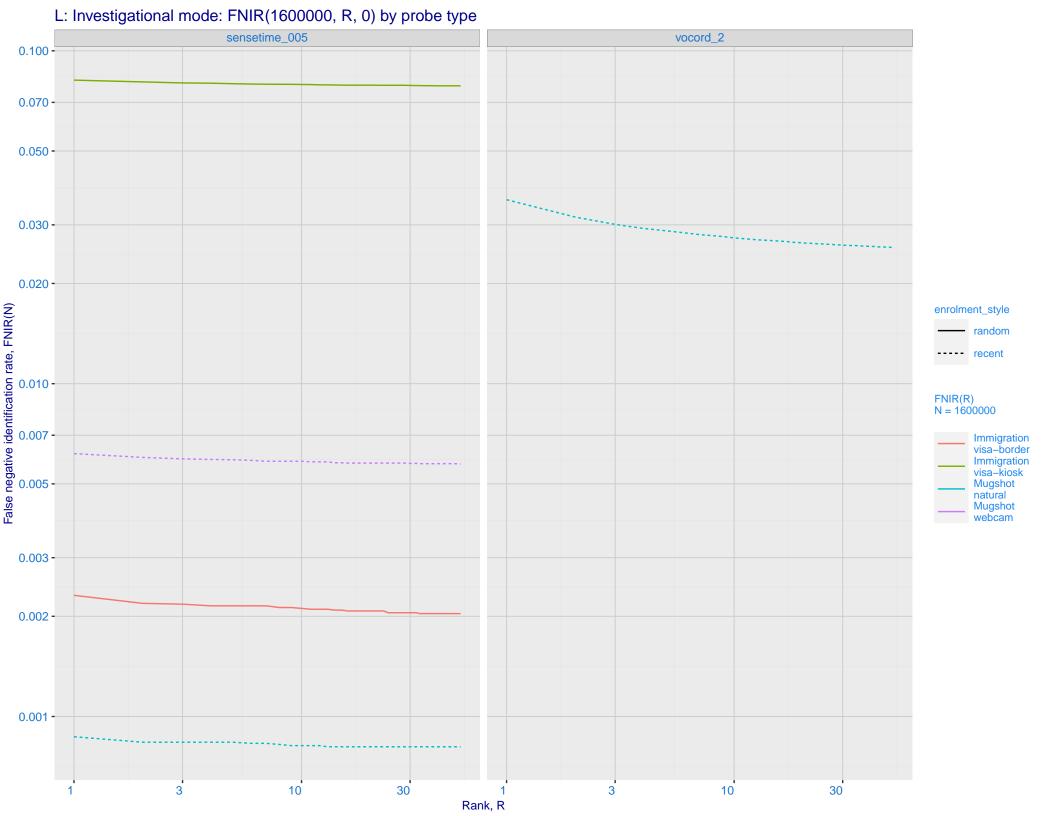


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -Selectivity, SEL(T) 3e-01 -2e-01 -2e-01 -1e-01 -Enrolled images: recent N = 1600000 Mugshot natural 7e-02 -5e-02 -3e-02 -2e-02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

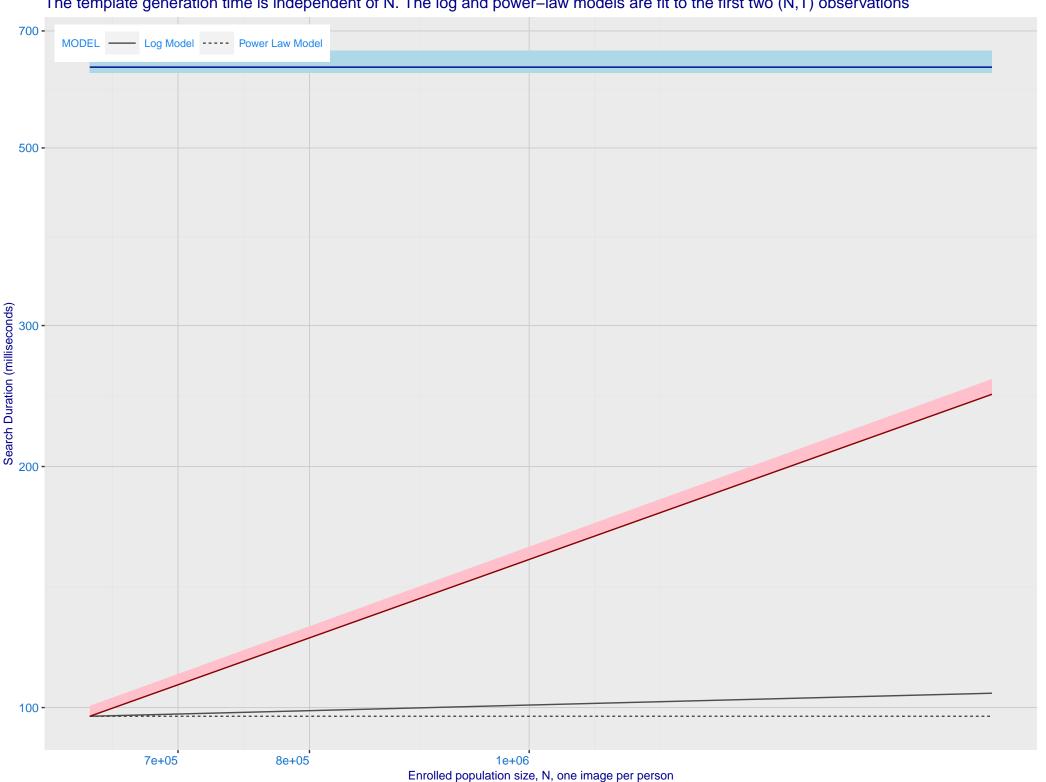




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Ealse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.030 - 0. enrolment_style - random ---- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 sensetime_005 vocord_2 0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -1e+06 3e+06 1e+07 1e+06 3e+06 1e+07 Enrolled population size, N



M: 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



Q: Identification FNIR(N, T, L+1) and Investigational FNIR(N, 0, R) under ageing



