A: Datasheet

Algorithm: tevian_0

Developer: Tevian

Submission Date: 2018_02_16

Template size: 2048 bytes

Template time (2.5 percentile): 360 msec

Template time (median): 395 msec

Template time (97.5 percentile): 426 msec

Investigation:

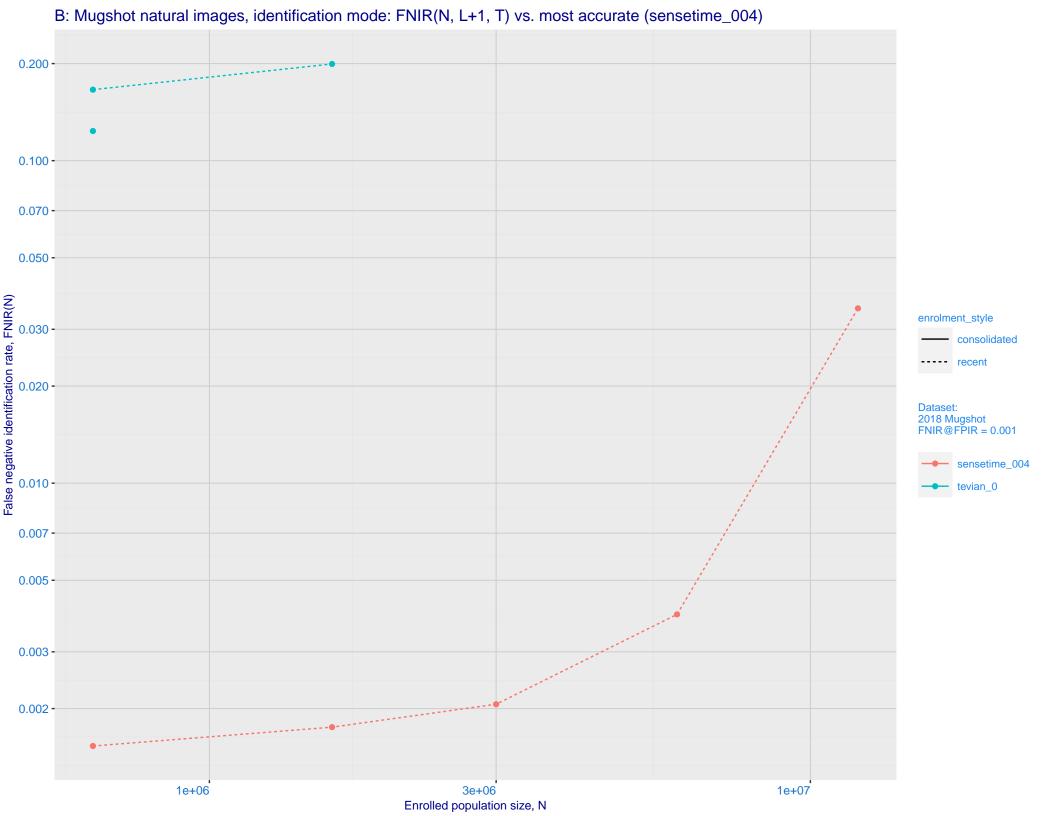
Frontal mugshot ranking 178 (out of 279) -- FNIR(1600000, 0, 1) = 0.0203 vs. lowest 0.0009 from sensetime_005

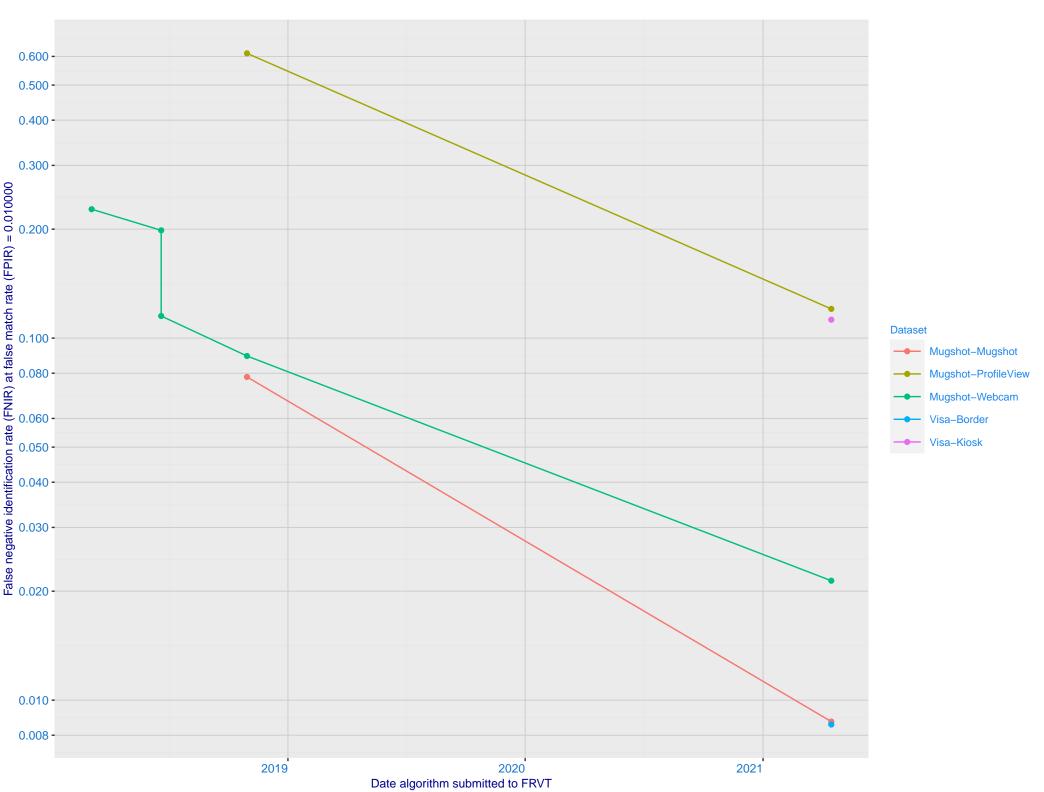
Mugshot webcam ranking 172 (out of 241) -- FNIR(1600000, 0, 1) = 0.0659 vs. lowest 0.0062 from sensetime_005

Identification:

Frontal mugshot ranking 186 (out of 279) -- FNIR(1600000, T, L+1) = 0.1995, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

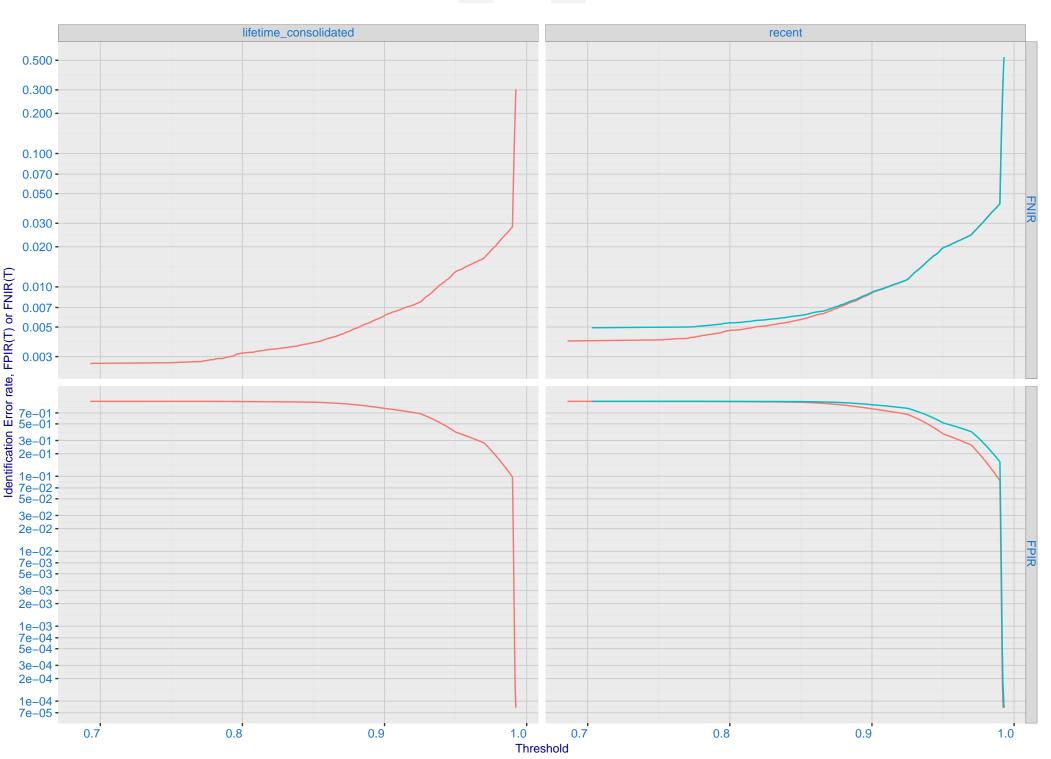
Mugshot webcam ranking 174 (out of 236) -- FNIR(1600000, T, L+1) = 0.3314, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003



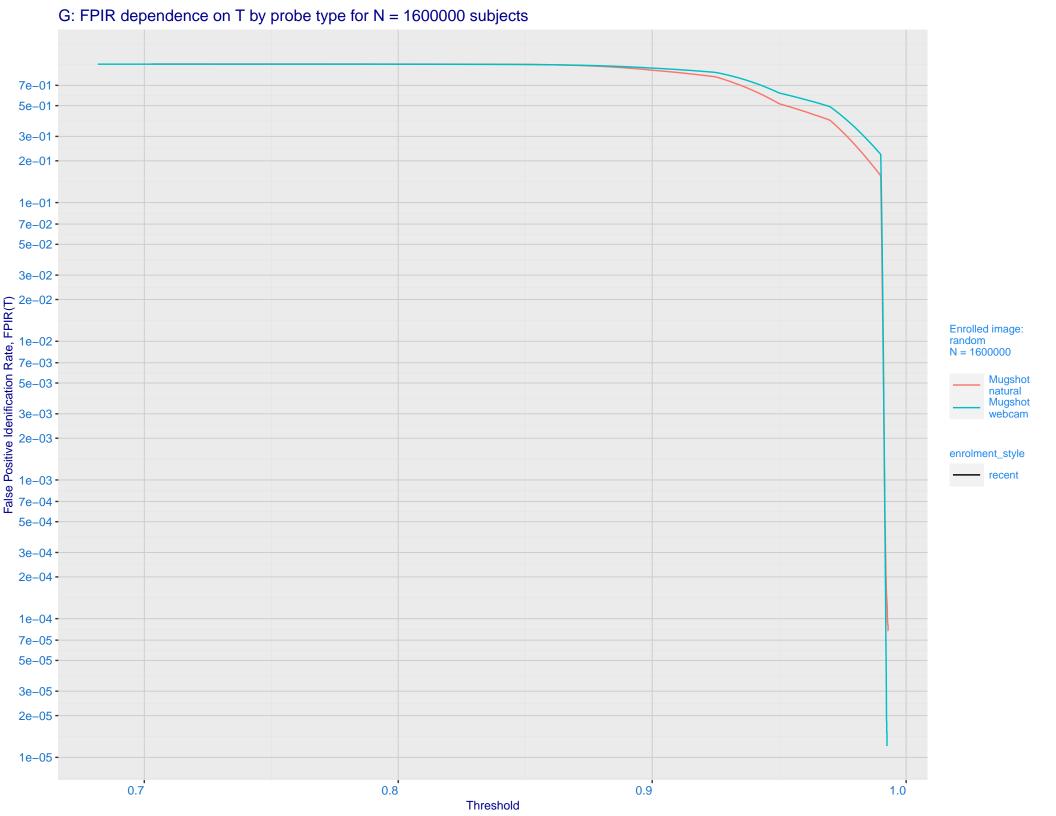


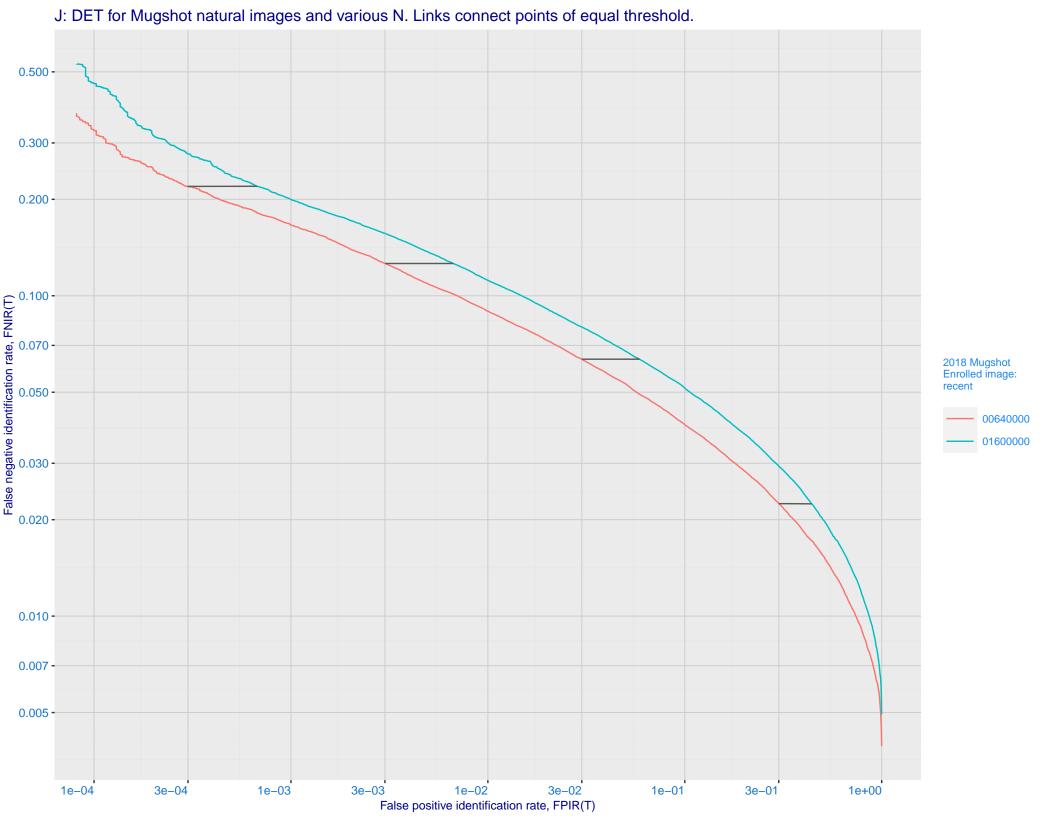
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 -0.050 sensetime 004 0.030 -0.020 -0.010 -0.007 -Ealse negative identification rate, FNIR(T) 0.003 - 0.000 - 0.500 - 0.500 - 0.200 - 0.100 - 0. enrolment_style random-ONE-MATE recent-ONE-MATE 0.070 -0.050 tevian 0 0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -False positive identification rate, FPIR(T)



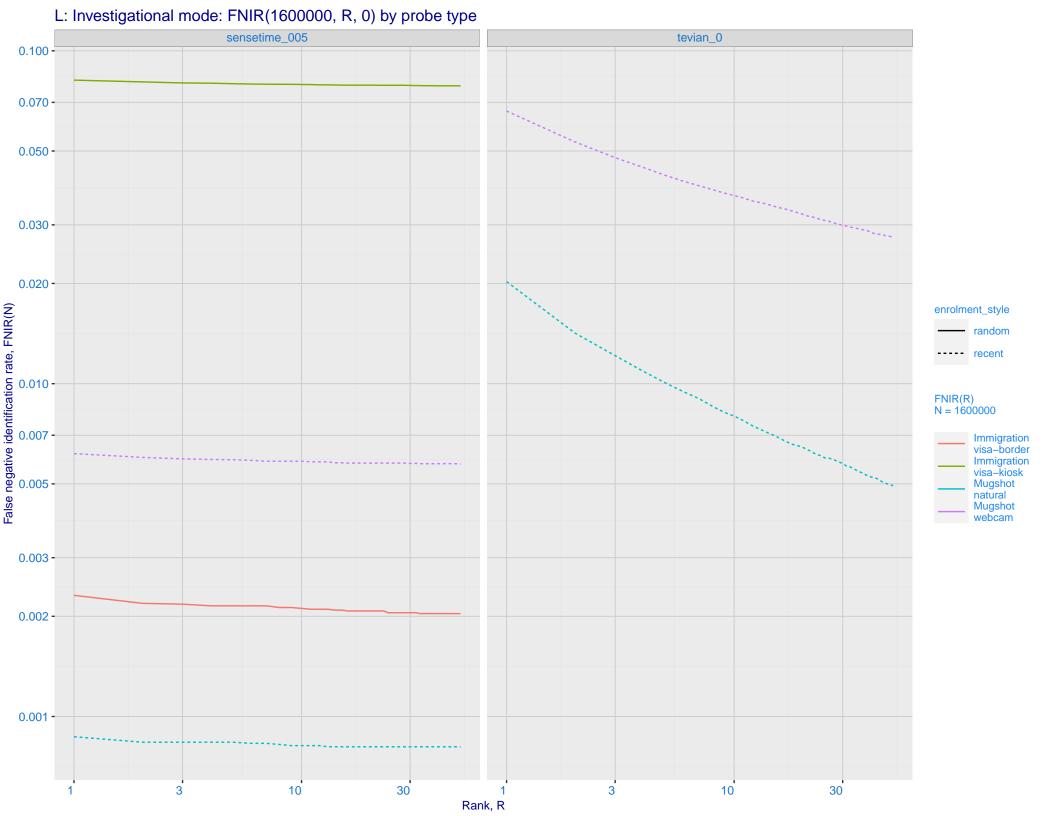


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 5e-01 -3e-01 -2e-01 -1e-01 - 7e-02 - 7e-02 - 5e-02 - 3e-02 - 2e-02 - 7e-02 **Enrolled images:** recent N = 1600000 Mugshot natural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

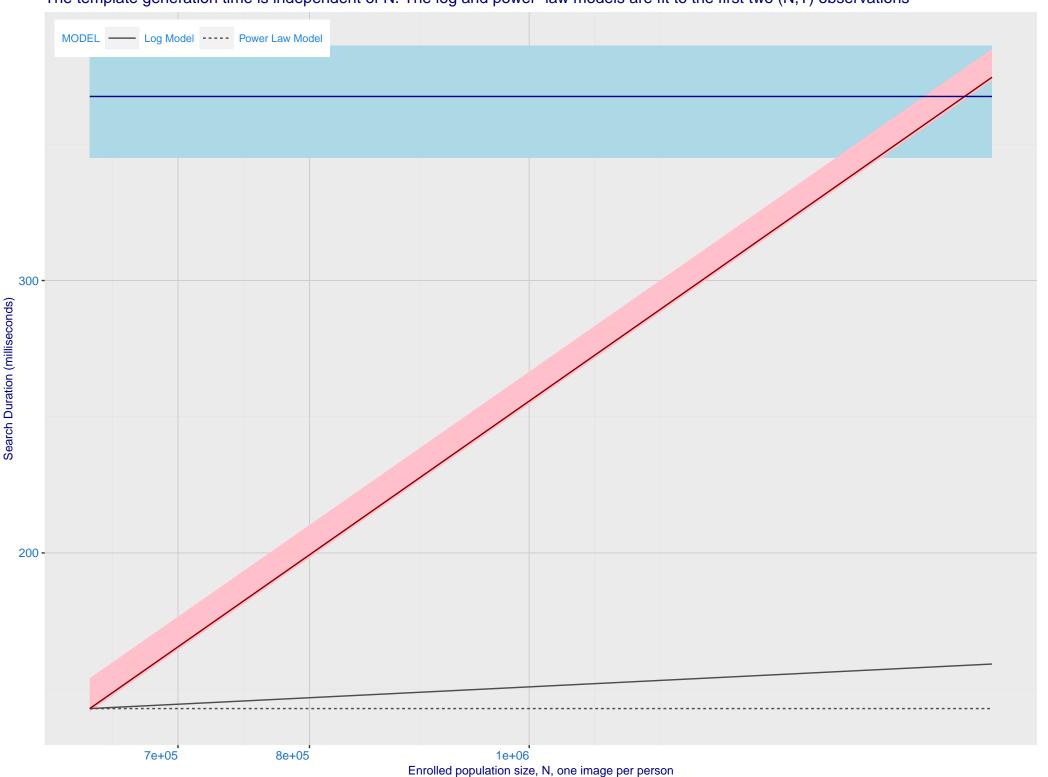




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.100 0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -Ealse negative identification rate, FNIR(N) 0.002 - 0.001 - 0.000 - 0.050 - 0.030 - 0. enrolment_style consolidated ---- random --- recent Mugshot webcam Mugshot natural FNIR@Rank = 1 sensetime_005 tevian_0 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



