A: Datasheet

Algorithm: yisheng_0

Developer: Zhuhai Yisheng Electronics Technology

Submission Date: 2018_02_14

Template size: 2108 bytes

Template time (2.5 percentile): 593 msec

Template time (median): 613 msec

Template time (97.5 percentile): 650 msec

Investigation:

Frontal mugshot ranking 187 (out of 279) -- FNIR(1600000, 0, 1) = 0.0243 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 168 (out of 241) -- FNIR(1600000, 0, 1) = 0.0601 vs. lowest 0.0062 from sensetime_005

Immigration visa-border ranking 112 (out of 168) -- FNIR(1600000, 0, 1) = 0.0581 vs. lowest 0.0013 from visionlabs_010

Immigration visa-kiosk ranking 117 (out of 165) -- FNIR(1600000, 0, 1) = 0.2923 vs. lowest 0.0568 from cloudwalk_hr_000

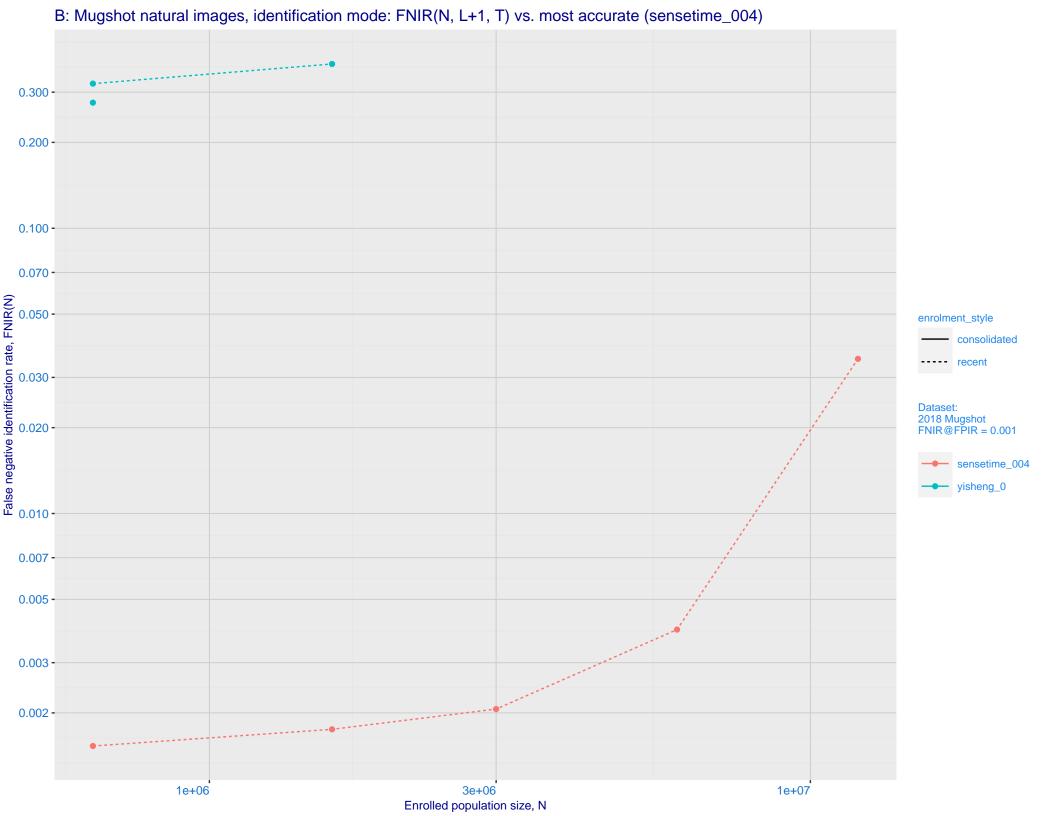
Identification:

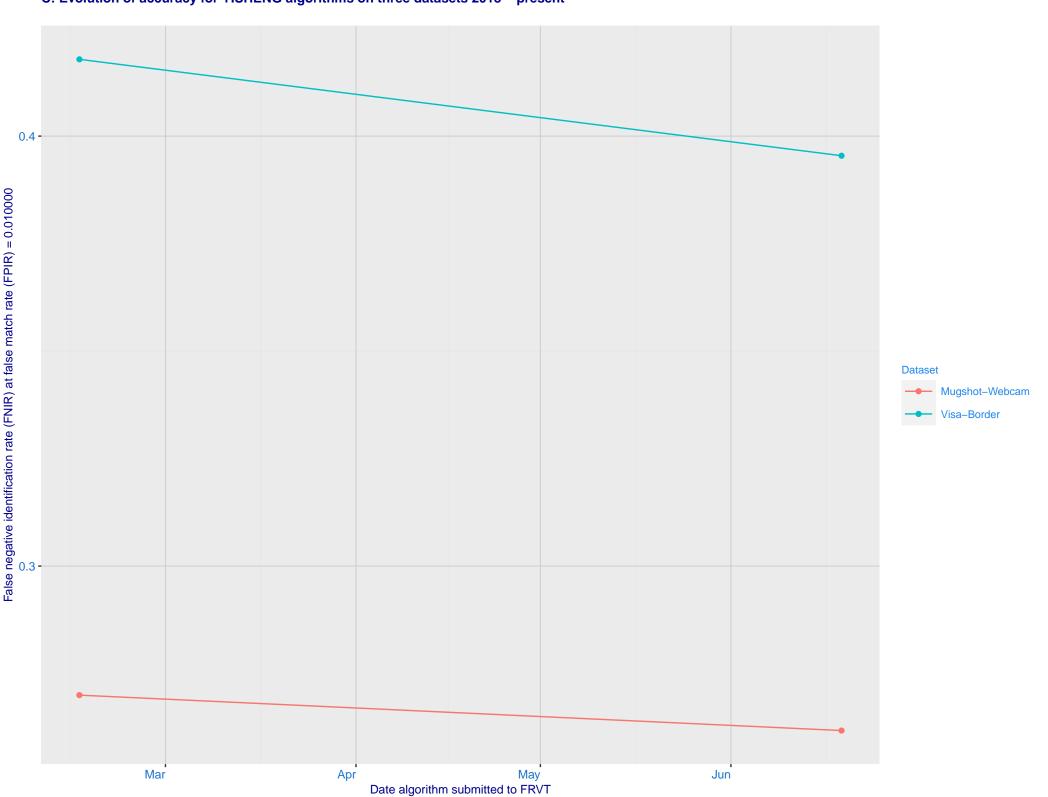
Frontal mugshot ranking 217 (out of 279) -- FNIR(1600000, T, L+1) = 0.3766, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 226 (out of 236) -- FNIR(1600000, T, L+1) = 0.9738, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Immigration visa-border ranking 150 (out of 167) -- FNIR(1600000, T, L+1) = 0.9810, FPIR=0.001000 vs. lowest 0.0047 from idemia_008

Immigration visa-kiosk ranking 142 (out of 162) -- FNIR(1600000, T, L+1) = 0.9983, FPIR=0.001000 vs. lowest 0.0996 from cloudwalk_hr_000

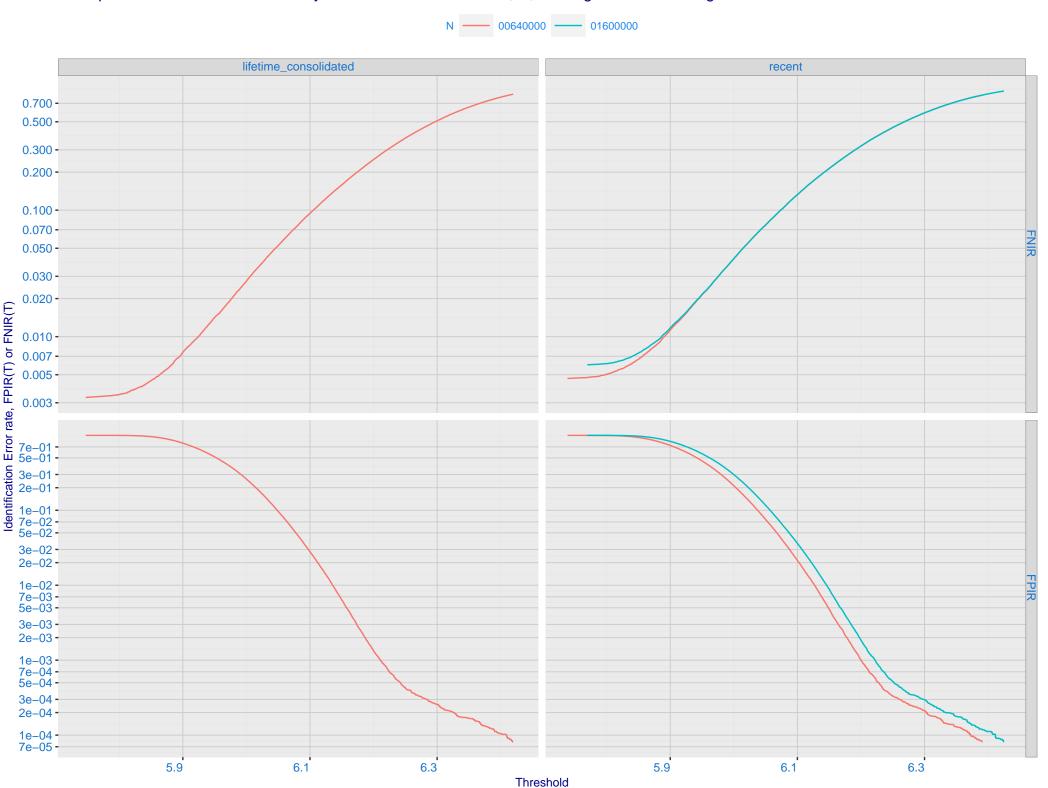




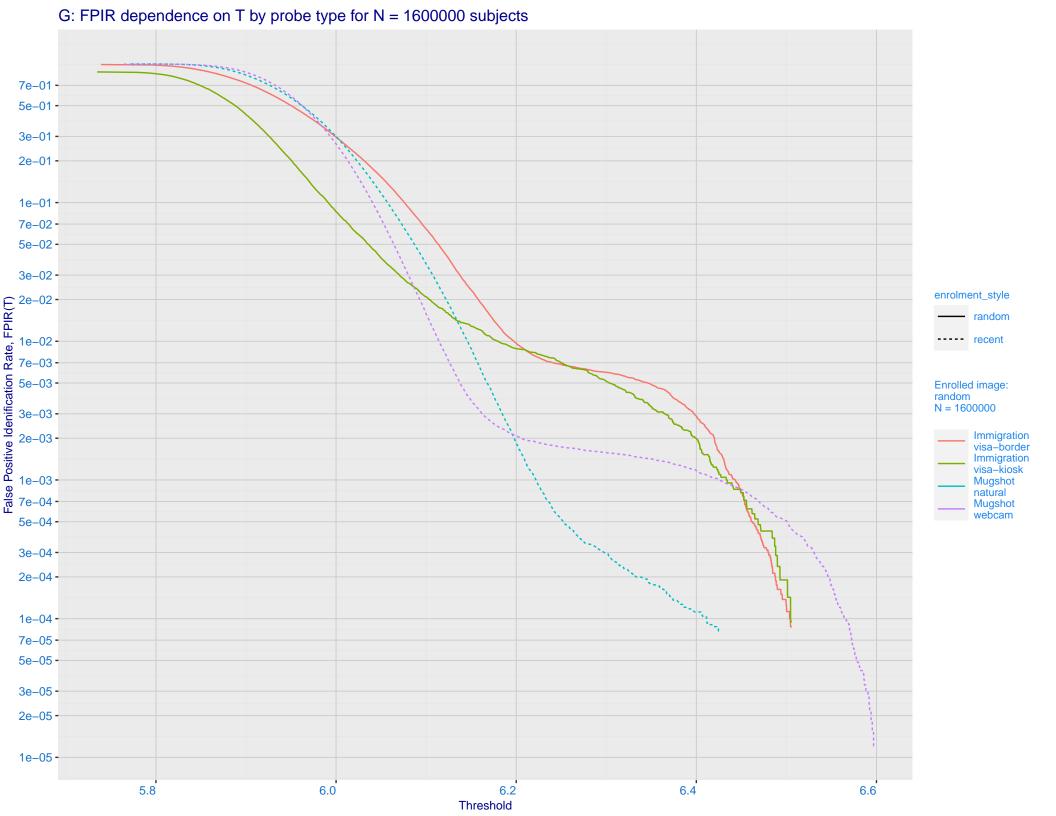
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 -0.500 -0.300 -0.200 -0.100 -0.070 sensetime 004 0.050 -0.030 -0.020 -0.010 -0.007 - 0.005 - 0.005 - 0.002 - 0.001 - 0.001 - 0.700 - 0.500 - 0.200 enrolment_style random-ONE-MATE recent-ONE-MATE 0.100 -0.070 -0.050 yisheng 0 0.030 -0.020 -0.010 -0.007 -0.005 -0.003 -0.002 -0.001 -

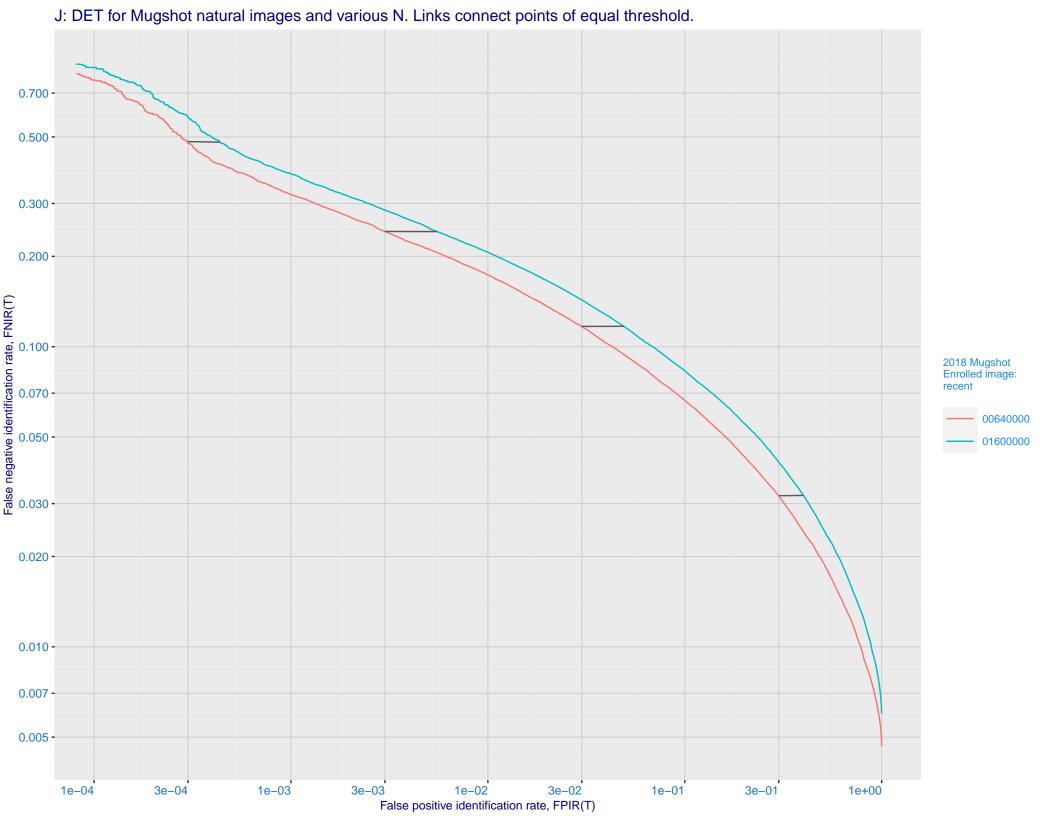
False positive identification rate, FPIR(T)

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

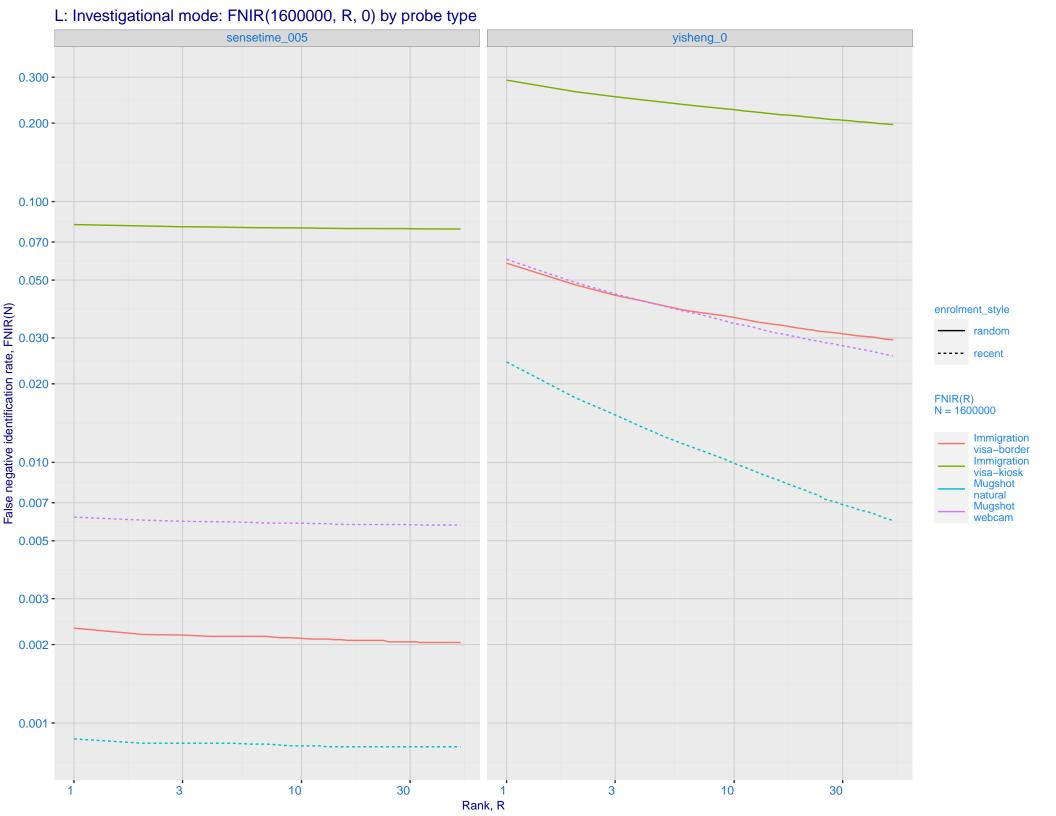


F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate 7e+01 -5e+01 -3e+01 -2e+01 -1e+01 -7e+00 -5e+00 -3e+00 -2e+00 -1e+00 -7e-01 -5e-01 -3e-01 -2e-01 -1e-01 -7e-02 - 5e-02 -**Enrolled images:** recent N = 1600000 % 3e-02 -2e-02 -1e-02 -Mugshot natural Mugshot 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 -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)

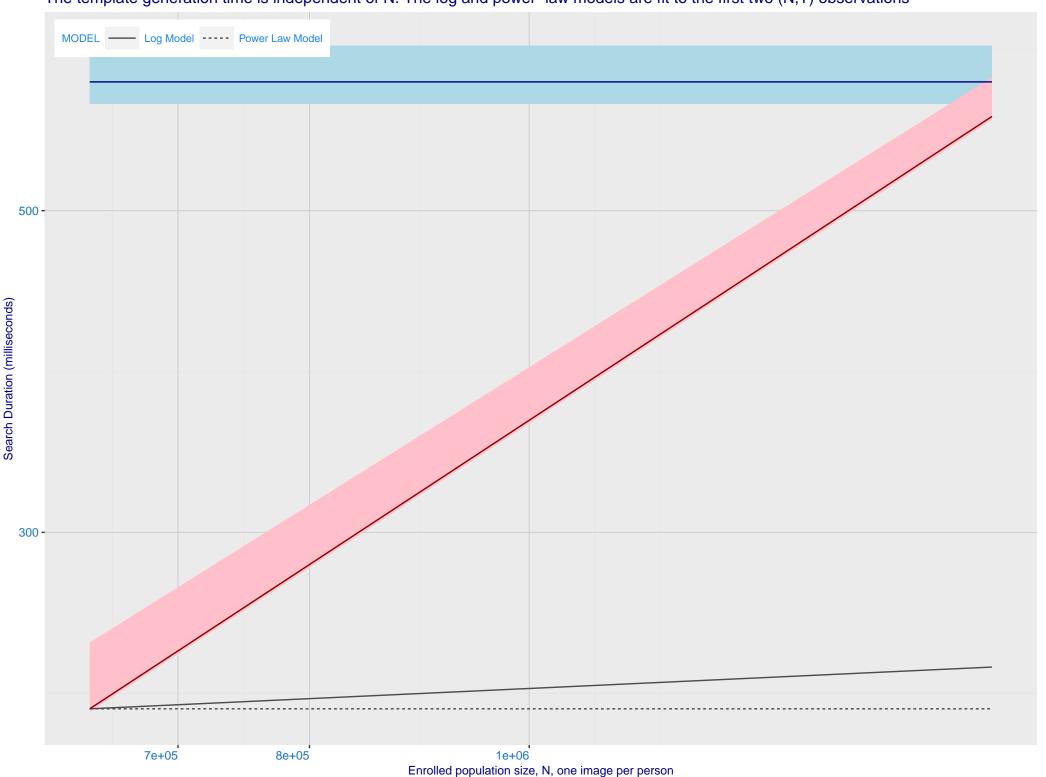




K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005) Immigration **Immigration** visa-border visa-kiosk 0.300 -0.200 -0.100 -0.070 -0.050 -0.030 -0.020 -0.010 -0.007 -0.005 -Ealse negative identification rate, FNIR(N) 0.003 - 0.001 - 0.300 - 0.100 - 0.070 - 0. enrolment_style consolidated ---- random --- recent Mugshot Mugshot webcam natural FNIR@Rank = 1 sensetime_005 yisheng_0 0.050 -0.030 -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



