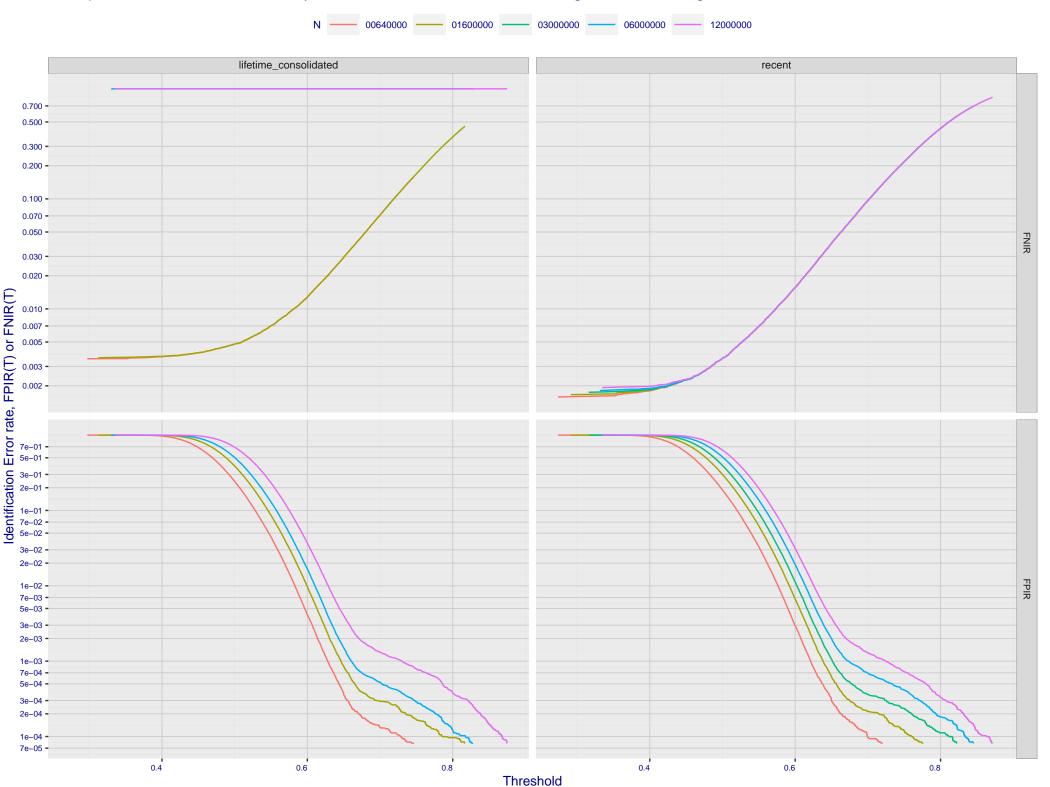
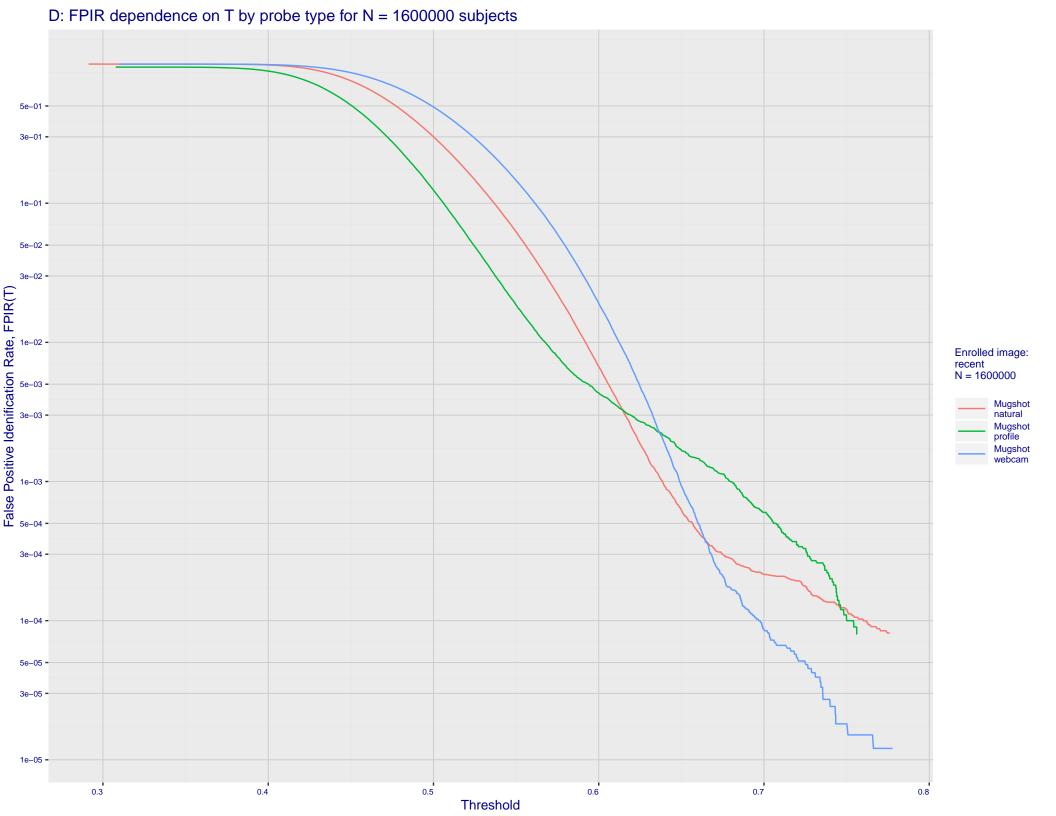
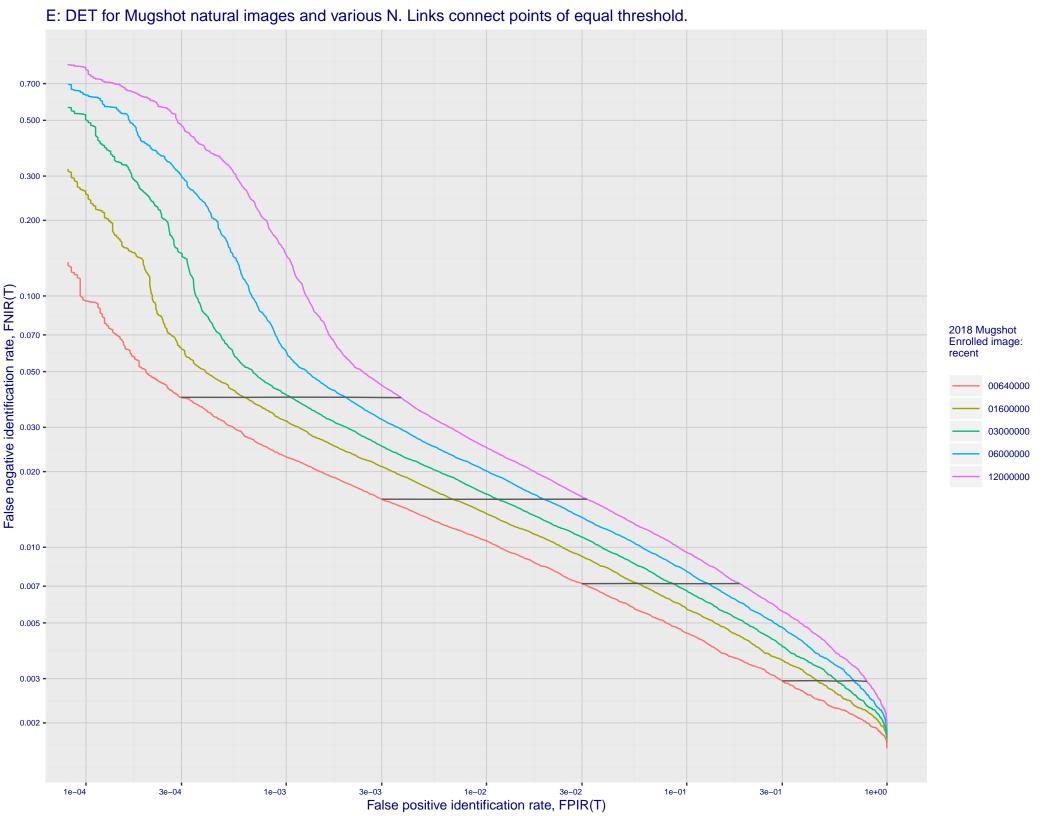
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals Immigration Immigration Mugshot visa-border visa-kiosk natural 0.700 0.500 -0.300 -0.200 -False negative identification rate, FNIR(T) enrolment_style consolidated-ONE-MATE random-ONE-MATE recent-ONE-MATE unconsolidated-ALL-MATES unconsolidated-ANY-MATE 0.007 -0.005 -0.003 -0.002 -1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e+00 1e-04 3e-04 1e-03 3e-03 1e-02 3e-02 1e-01 3e-01 1e-01 False positive identification rate, FPIR(T)

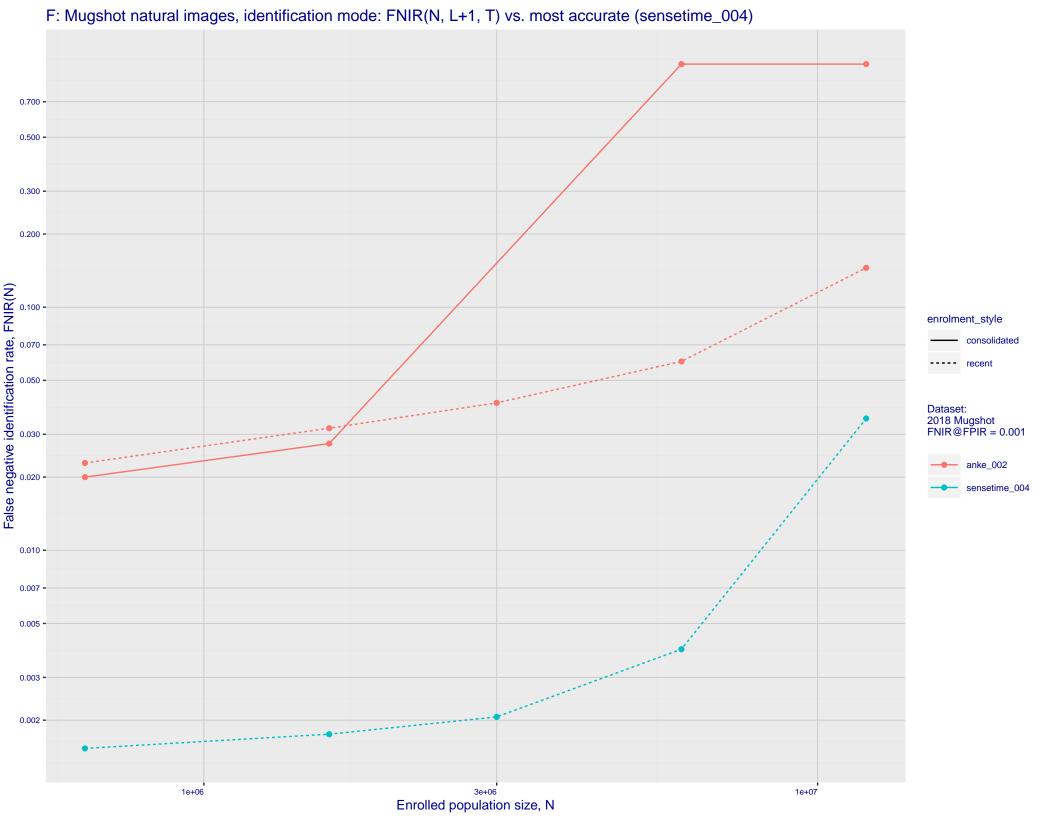
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



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 - 7e-02 - 7e-03 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 -1e-05 1e-04 3e-04 1e-01 3e-01 False Positive Idenification Rate, FPIR(T)

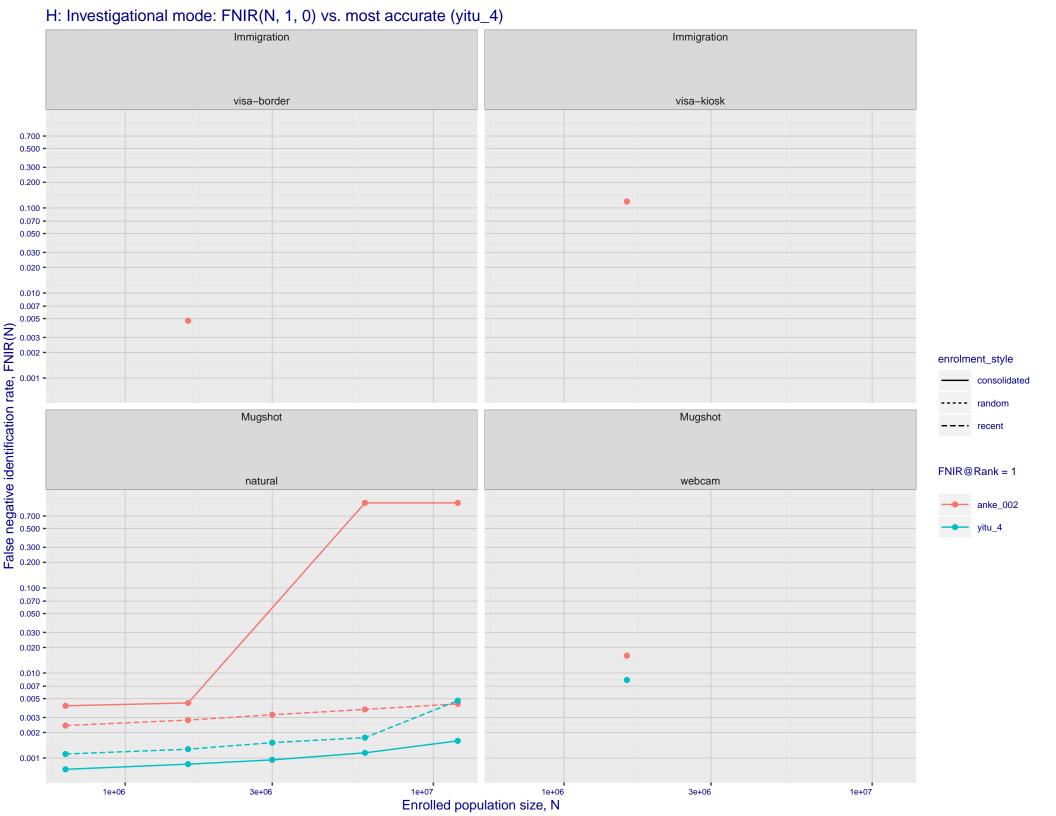


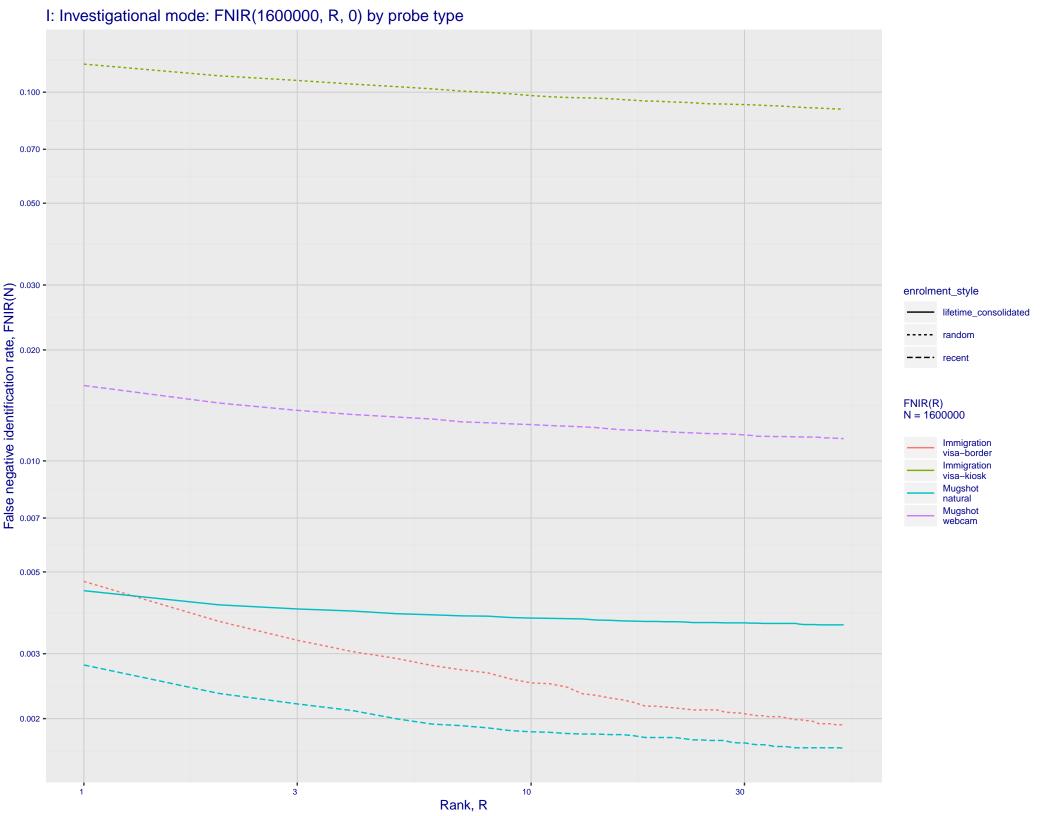




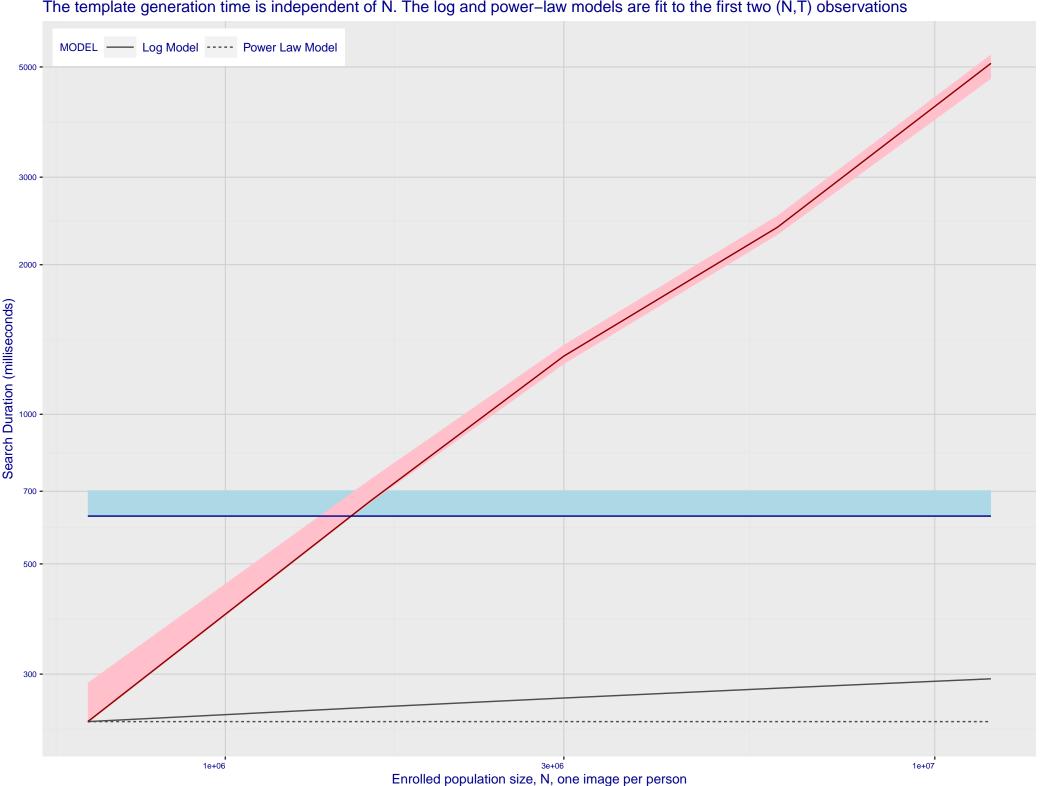
G: Datasheet

Algorithm: anke_002 Developer: Anke Investments Submission Date: 2019_06_27 Template size: 2056 bytes Template time (2.5 percentile): 622 msec Template time (median): 624 msec Template time (97.5 percentile): 703 msec Frontal mugshot investigation rank 41 -- FNIR(1600000, 0, 1) = 0.0028 vs. lowest 0.0010 from sensetime_004 natural investigation rank 39 -- FNIR(1600000, 0, 1) = 0.0160 vs. lowest 0.0067 from sensetime_003 natural investigation rank 71 -- FNIR(1600000, 0, 1) = 0.3647 vs. lowest 0.0492 from paravision_005 natural investigation rank 71 -- FNIR(1600000, 0, 1) = 0.3647 vs. lowest 0.0492 from paravision_005 natural investigation rank 26 -- FNIR(1600000, 0, 1) = 0.0047 vs. lowest 0.0014 from visionlabs_009 natural investigation rank 34 -- FNIR(1600000, 0, 1) = 0.1192 vs. lowest 0.0694 from cib_000 Frontal mugshot identification rank 44 -- FNIR(1600000, T, L+1) = 0.0318 vs. lowest 0.0018 from sensetime_004 natural identification rank 35 -- FNIR(1600000, T, L+1) = 0.0790 vs. lowest 0.0122 from sensetime_003 natural identification rank 29 -- FNIR(1600000, T, L+1) = 0.8720 vs. lowest 0.1020 from sensetime_004 natural identification rank 25 -- FNIR(1600000, T, L+1) = 0.0345 vs. lowest 0.0059 from sensetime_004 natural identification rank 20 -- FNIR(1600000, T, L+1) = 0.2450 vs. lowest 0.1129 from visionlabs_009





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



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

