

A: Datasheet

Algorithm: megvii_2

Developer: Megvii/Face++

Submission Date: 2018_10_28

Template size: 4096 bytes

Template time (2.5 percentile): 634 msec

Template time (median): 635 msec

Template time (97.5 percentile): 692 msec

Investigation:

Frontal mugshot ranking 153 (out of 279) -- FNIR(1600000, 0, 1) = 0.0118 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 72 (out of 241) -- FNIR(1600000, 0, 1) = 0.0173 vs. lowest 0.0062 from sensetime_005

Mugshot profile ranking 50 (out of 210) -- FNIR(1600000, 0, 1) = 0.4501 vs. lowest 0.0587 from xforwardai_002

Immigration visa-border ranking 165 (out of 168) -- FNIR(1600000, 0, 1) = 1.0000 vs. lowest 0.0013 from visionlabs_010

Identification:

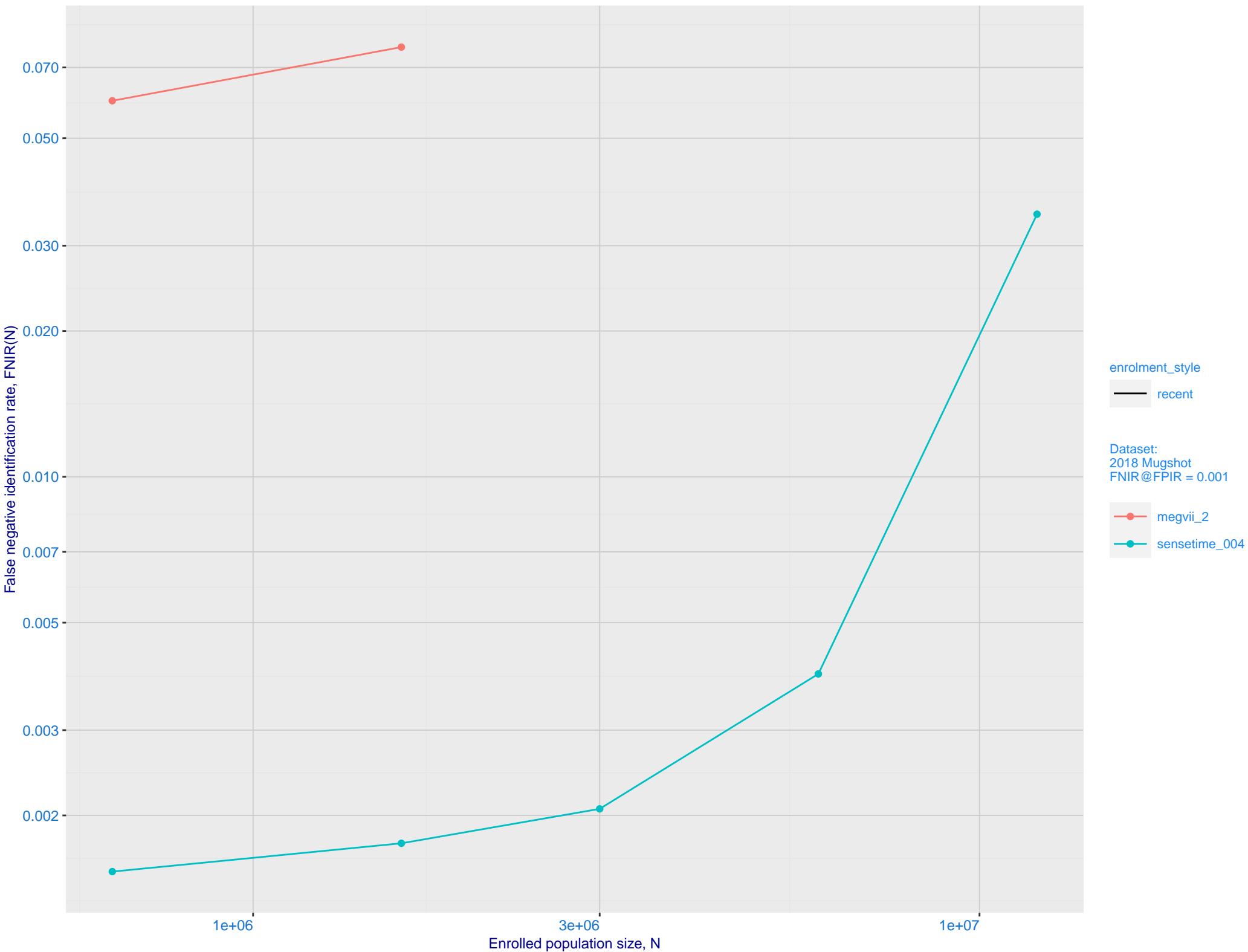
Frontal mugshot ranking 125 (out of 279) -- FNIR(1600000, T, L+1) = 0.0771, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 71 (out of 236) -- FNIR(1600000, T, L+1) = 0.0959, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

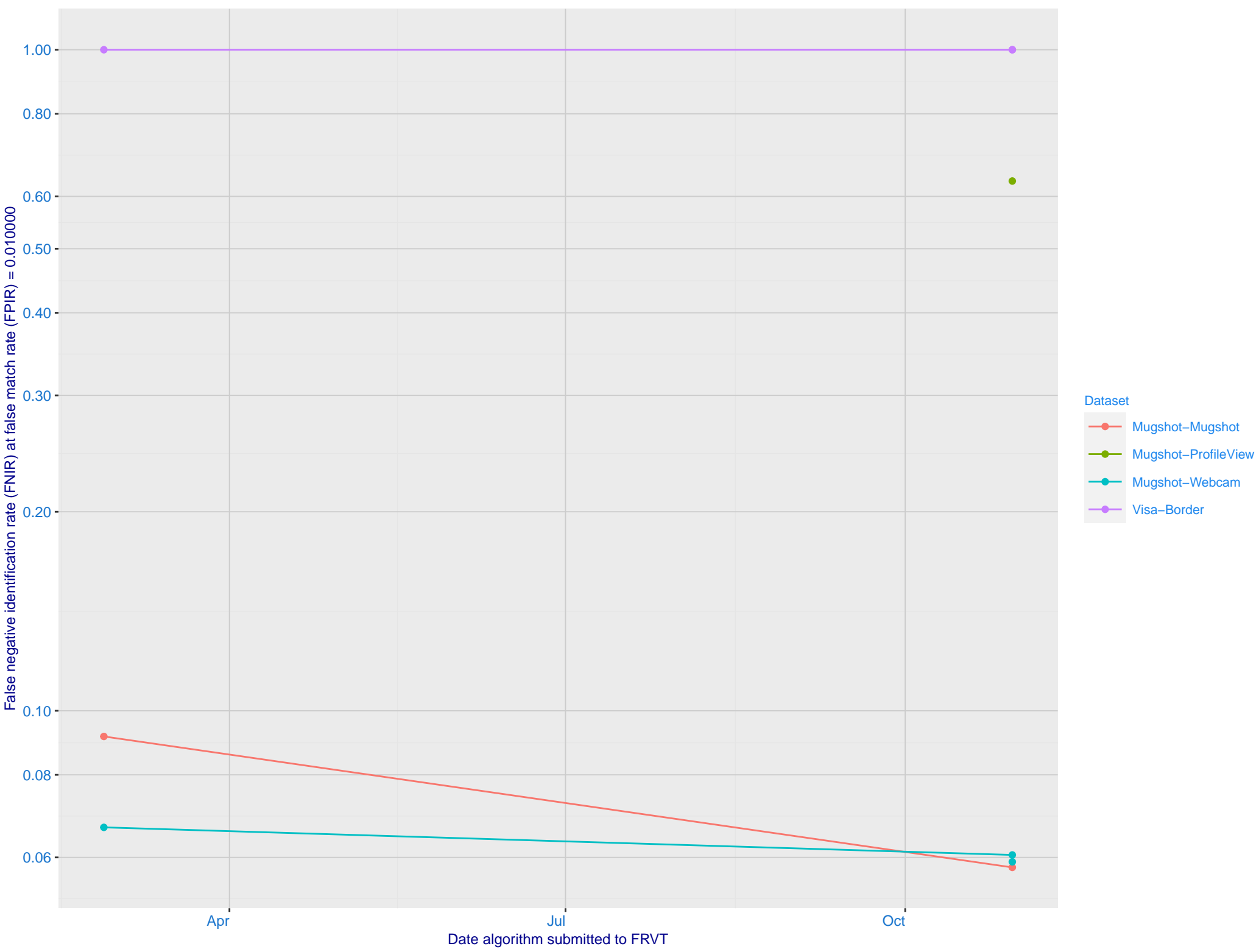
Mugshot profile ranking 131 (out of 209) -- FNIR(1600000, T, L+1) = 0.9984, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000

Immigration visa-border ranking 162 (out of 167) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.0047 from idemia_008

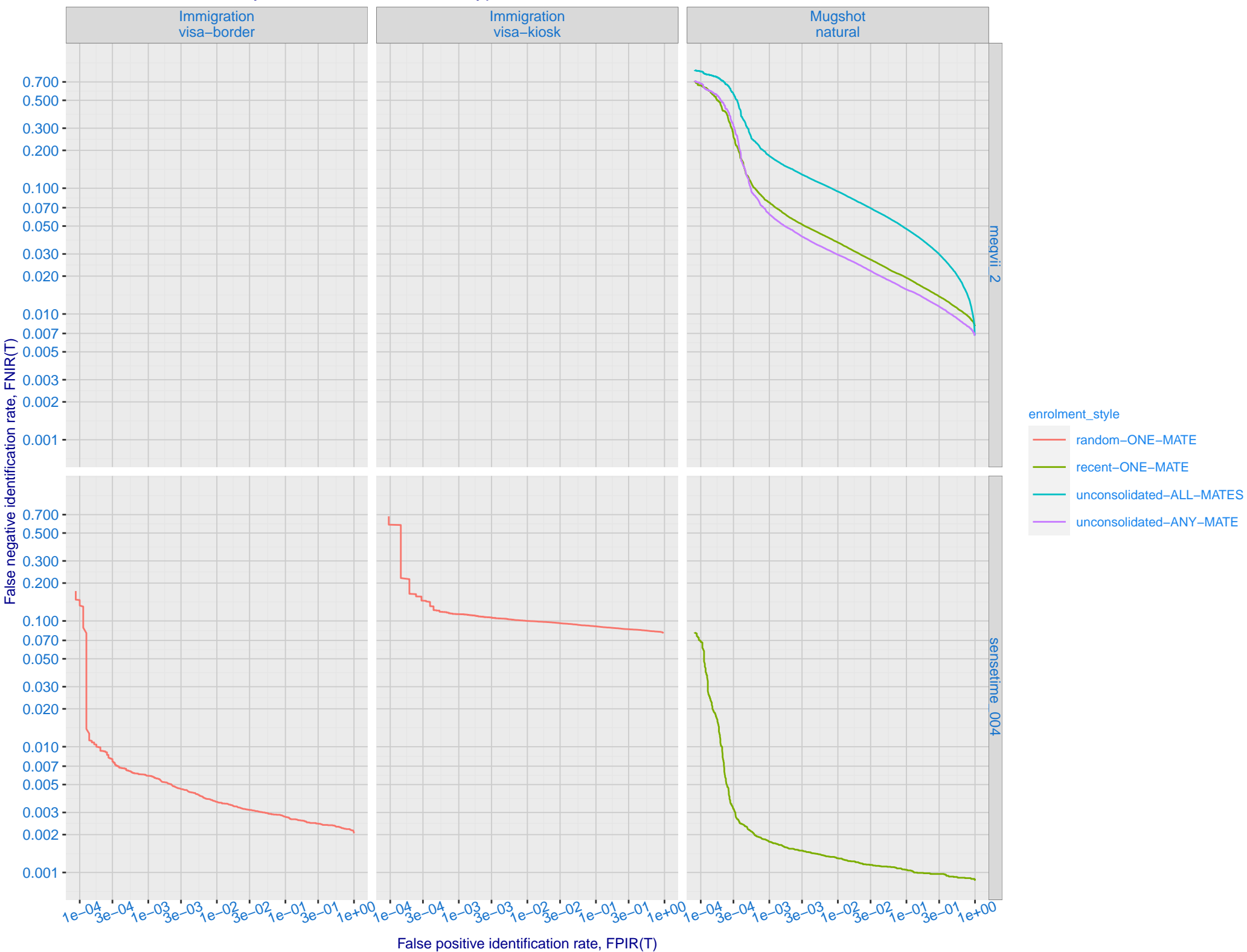
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)



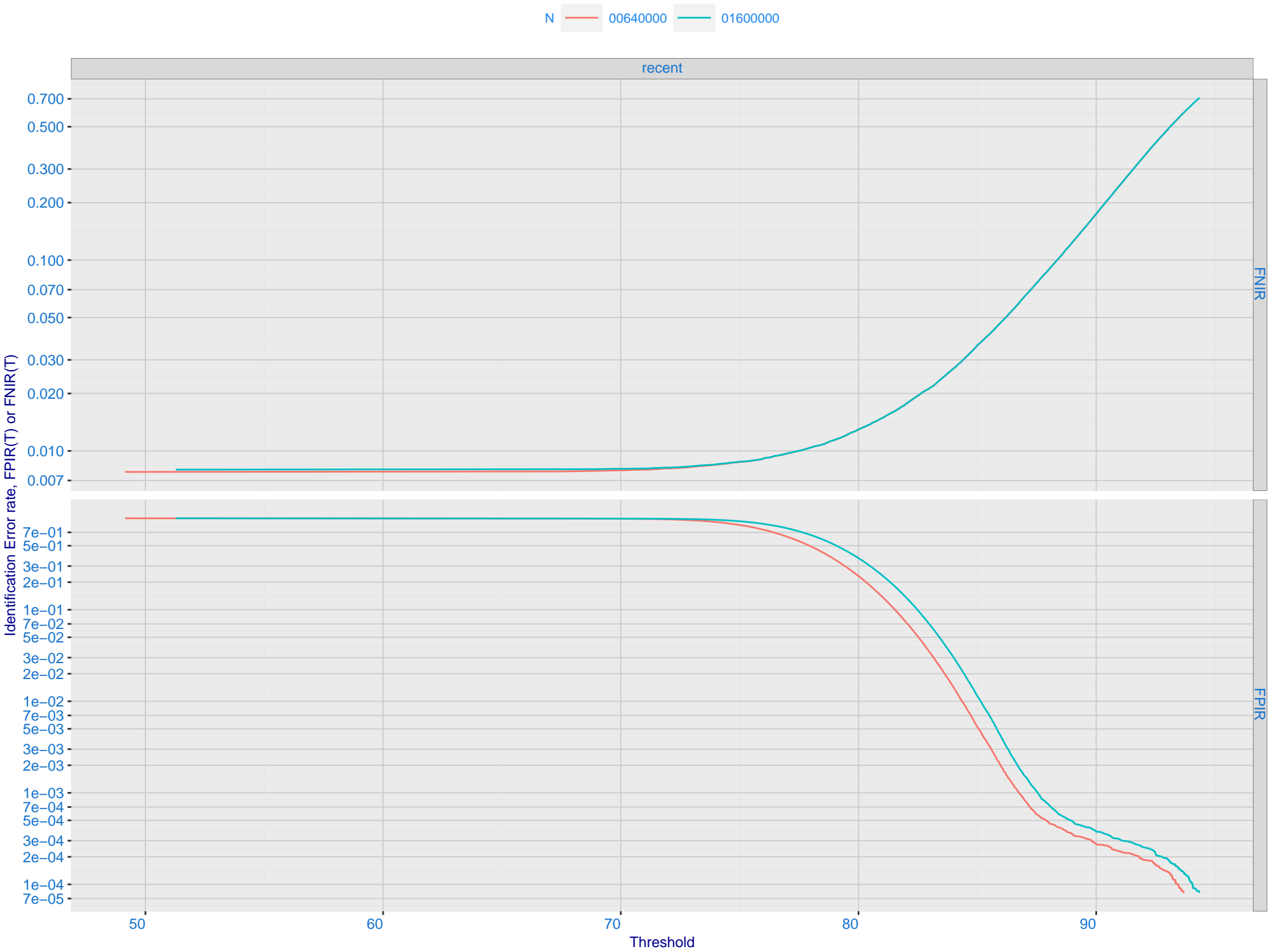
C: Evolution of accuracy for MEGVII algorithms on three datasets 2018 – present



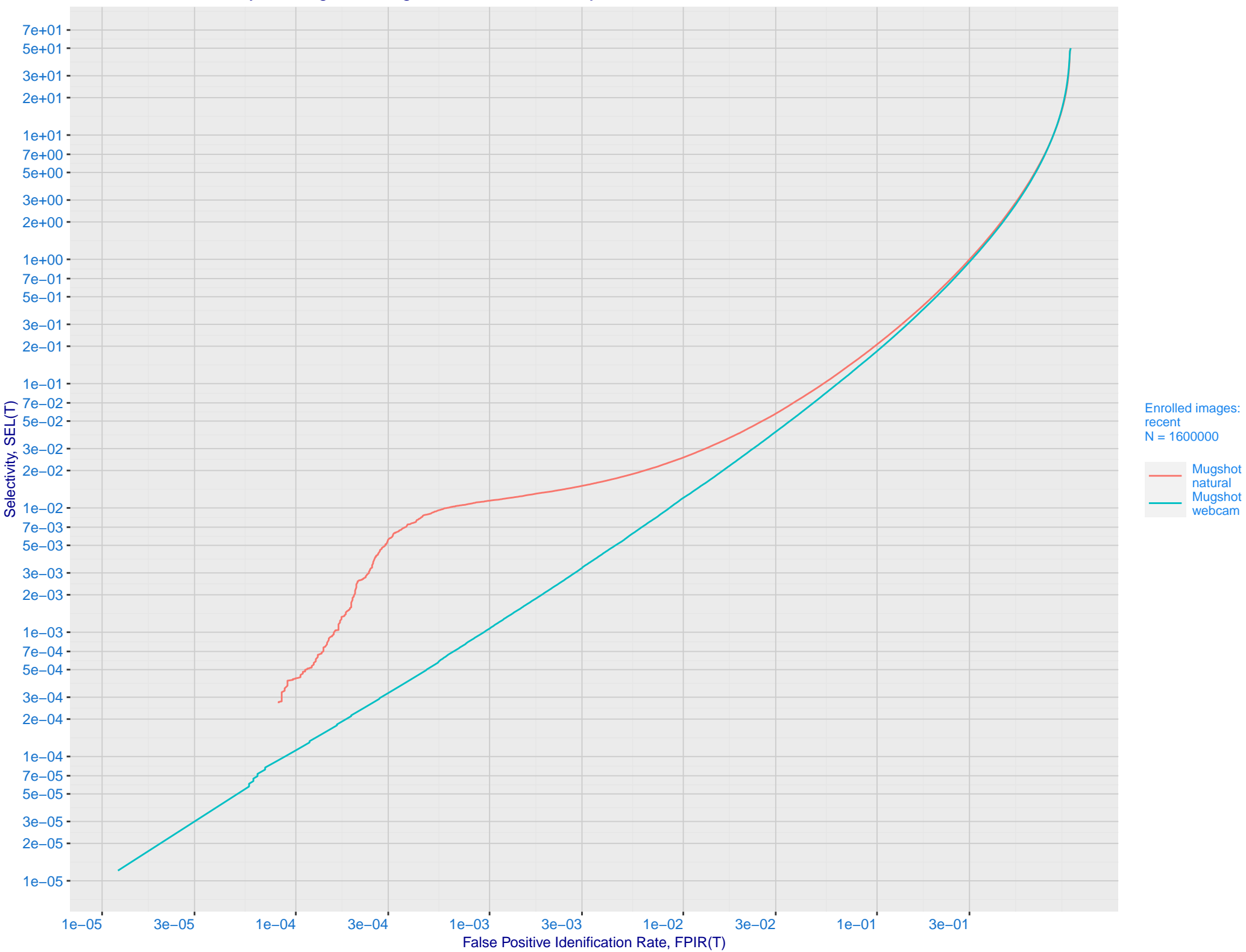
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



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

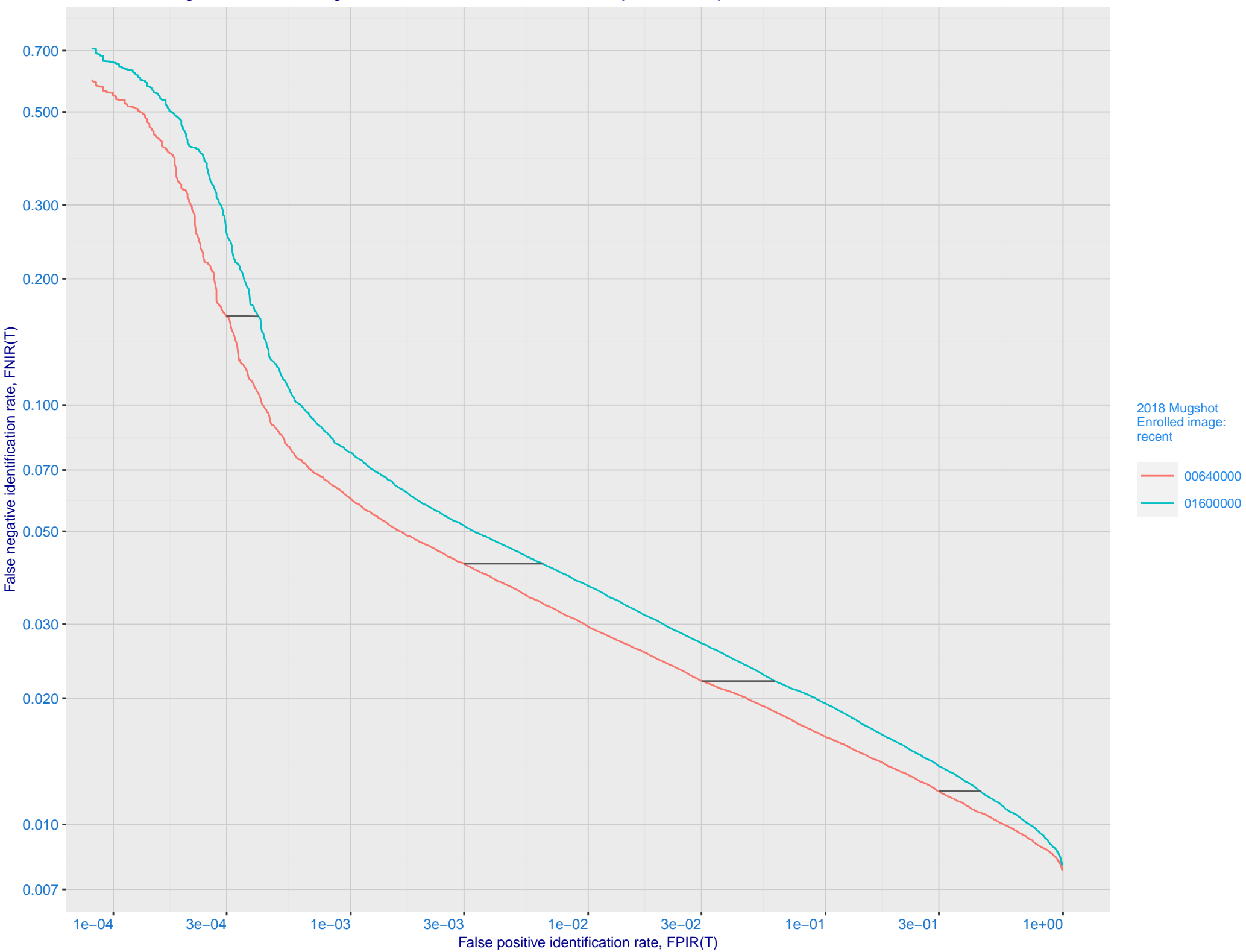


- Immigration visa—border
- Mugshot natural
- Mugshot profile
- Mugshot webcam

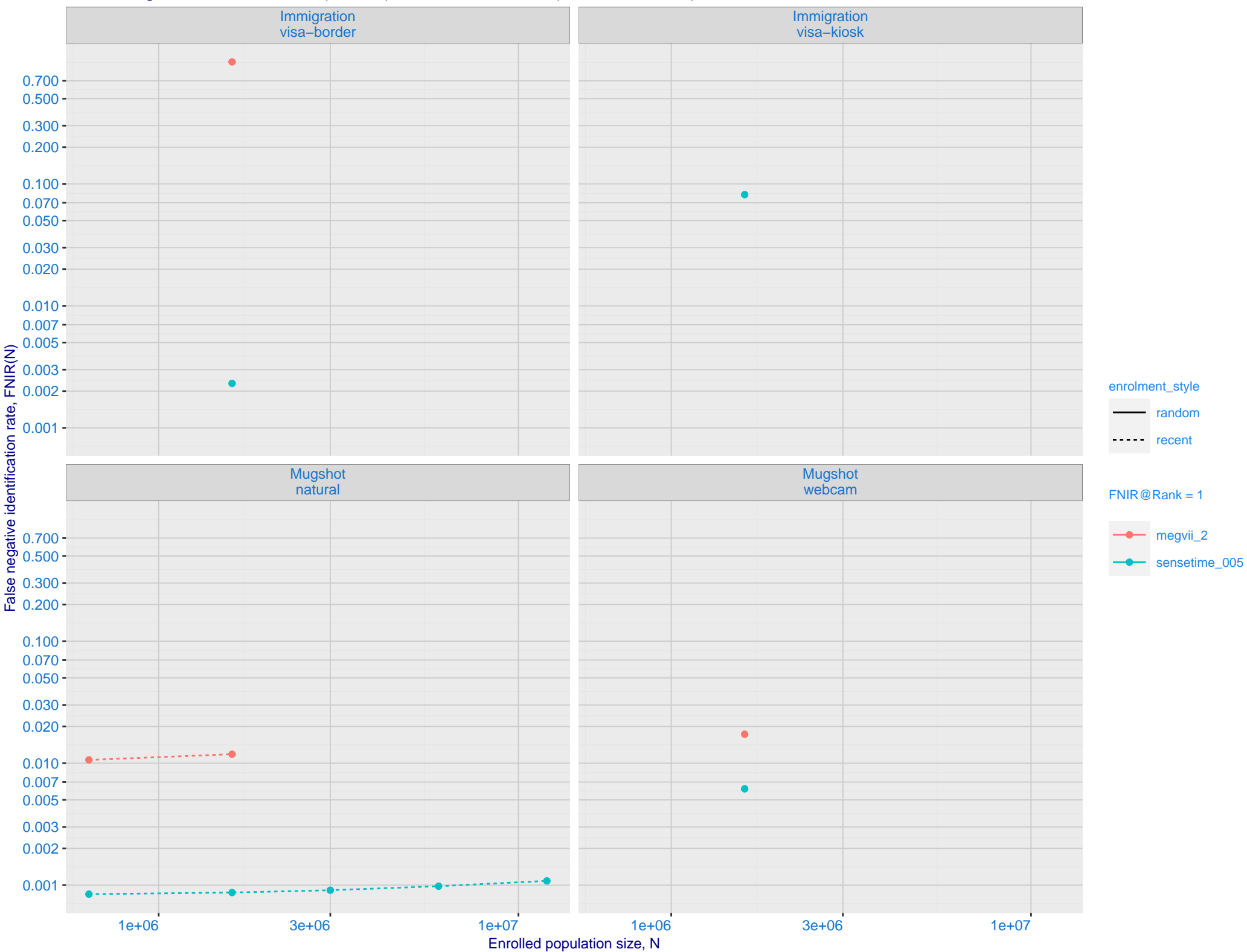
enrolment_style

—	random
- - - -	recent

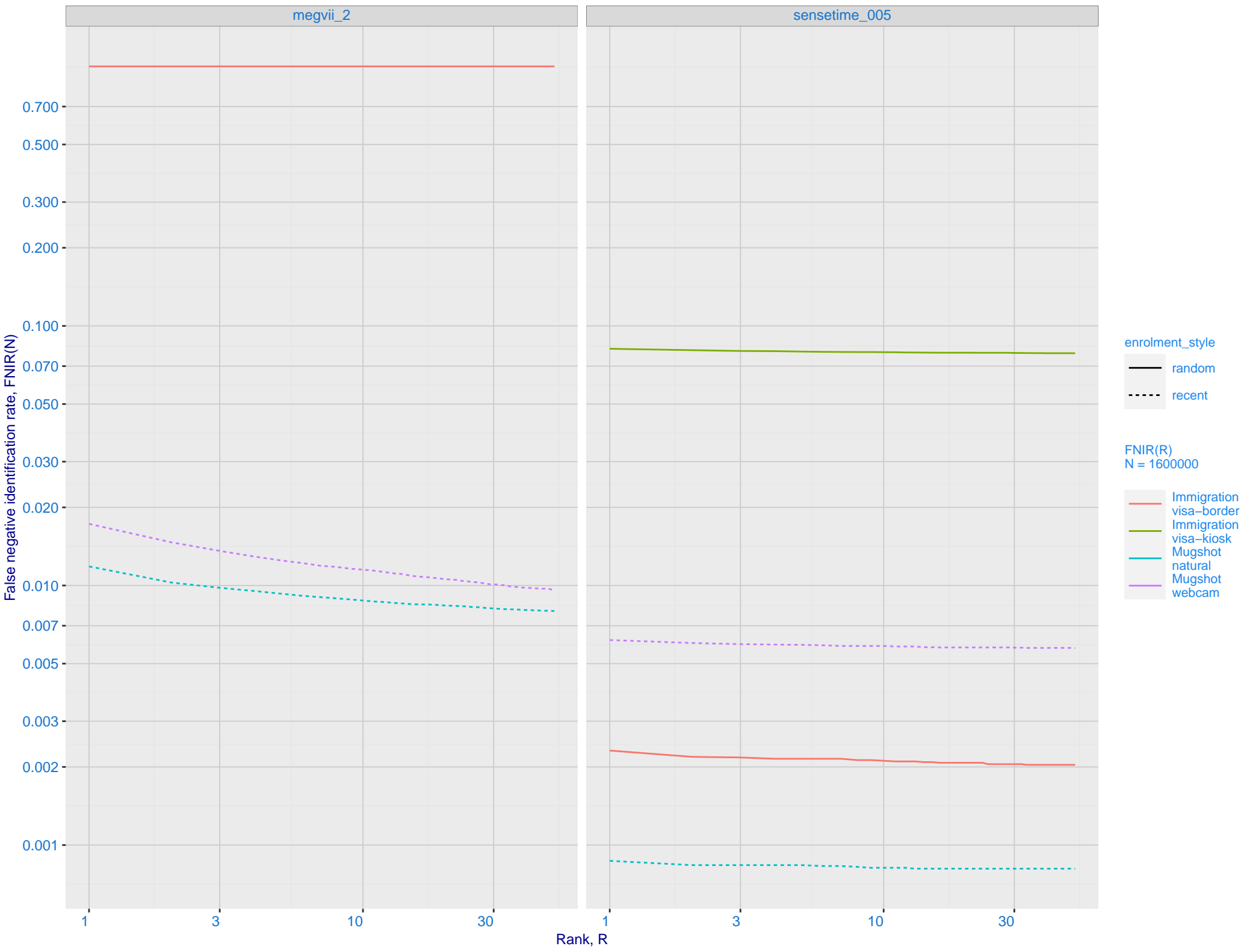
J: DET for Mugshot natural images and various N. Links connect points of equal threshold.



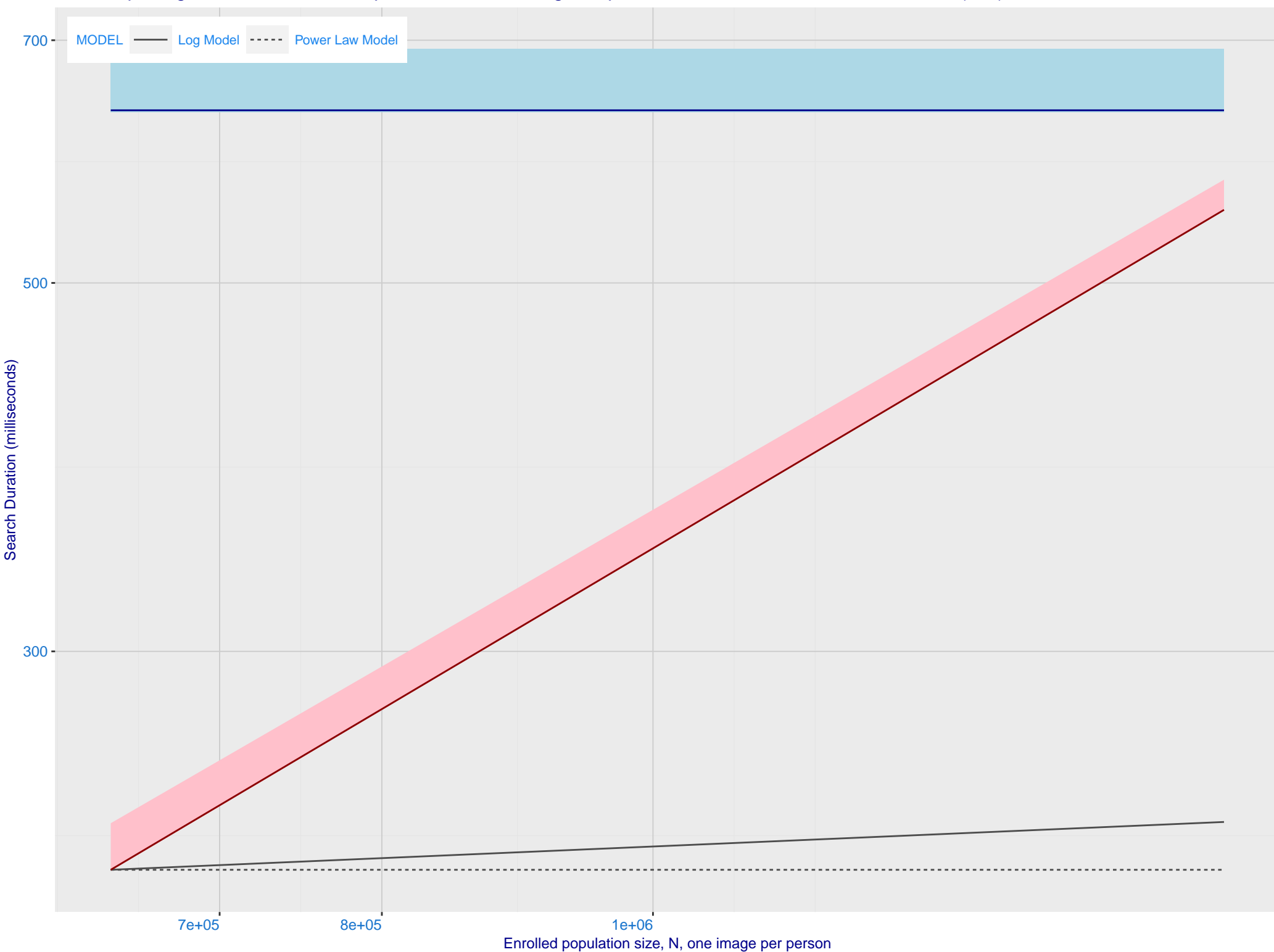
K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005)



L: Investigational mode: FNIR(1600000, R, 0) by probe type



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

Dataset: 2018 Mugshot N = 3068801

