

CONTROLLING HUMAN PERCEPTION OF BASIC USER TRAITS

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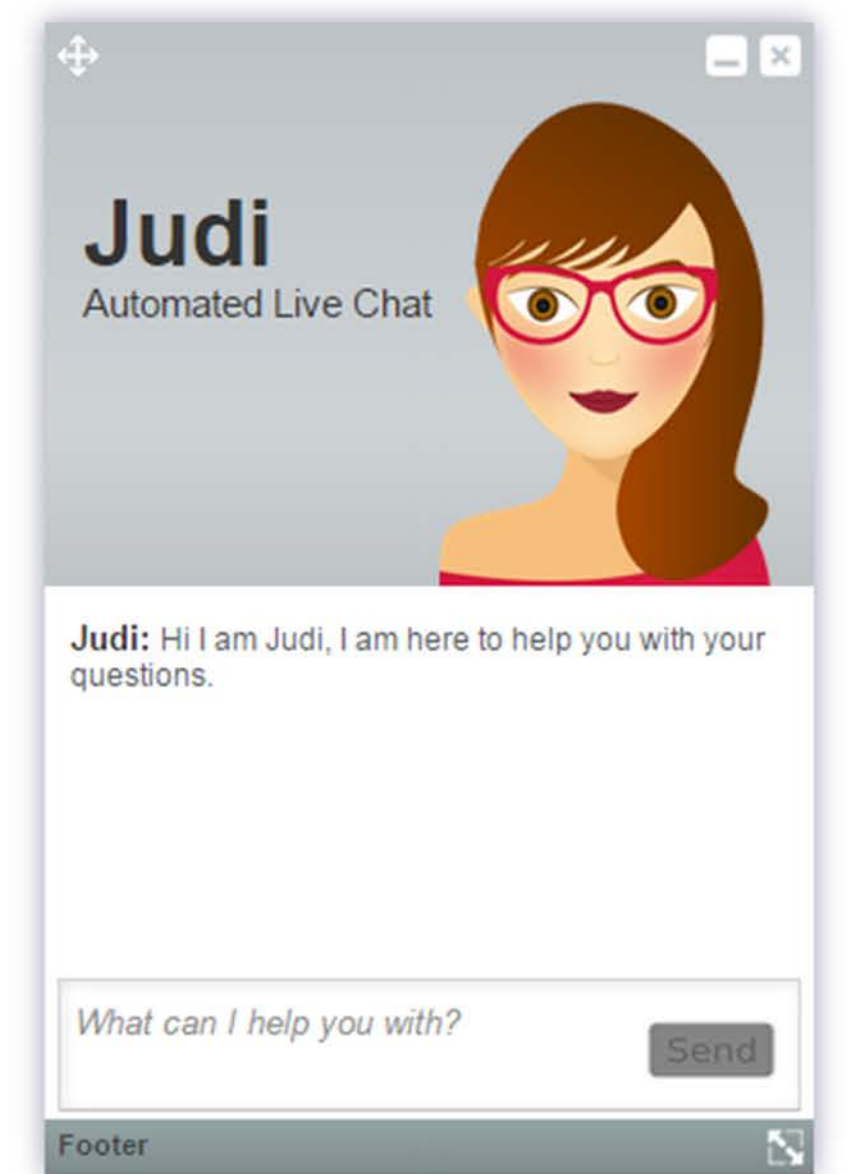


MOTIVATION

Can we make automated agents more likeable, effective and usable?

- Can we use automated methods to affect human perception of basic traits?

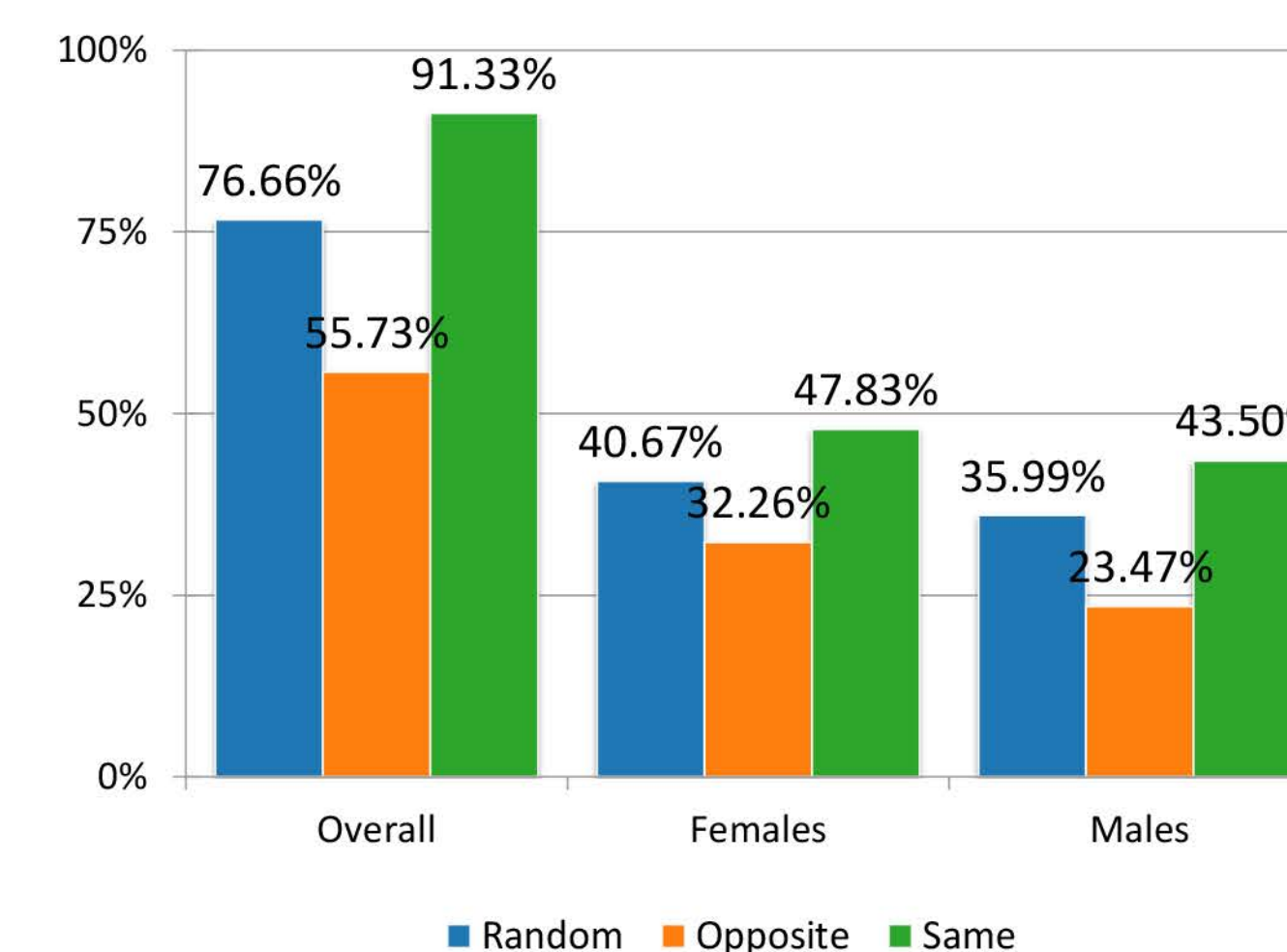
- Can we adapt text-generation methods to the person they are interacting with?



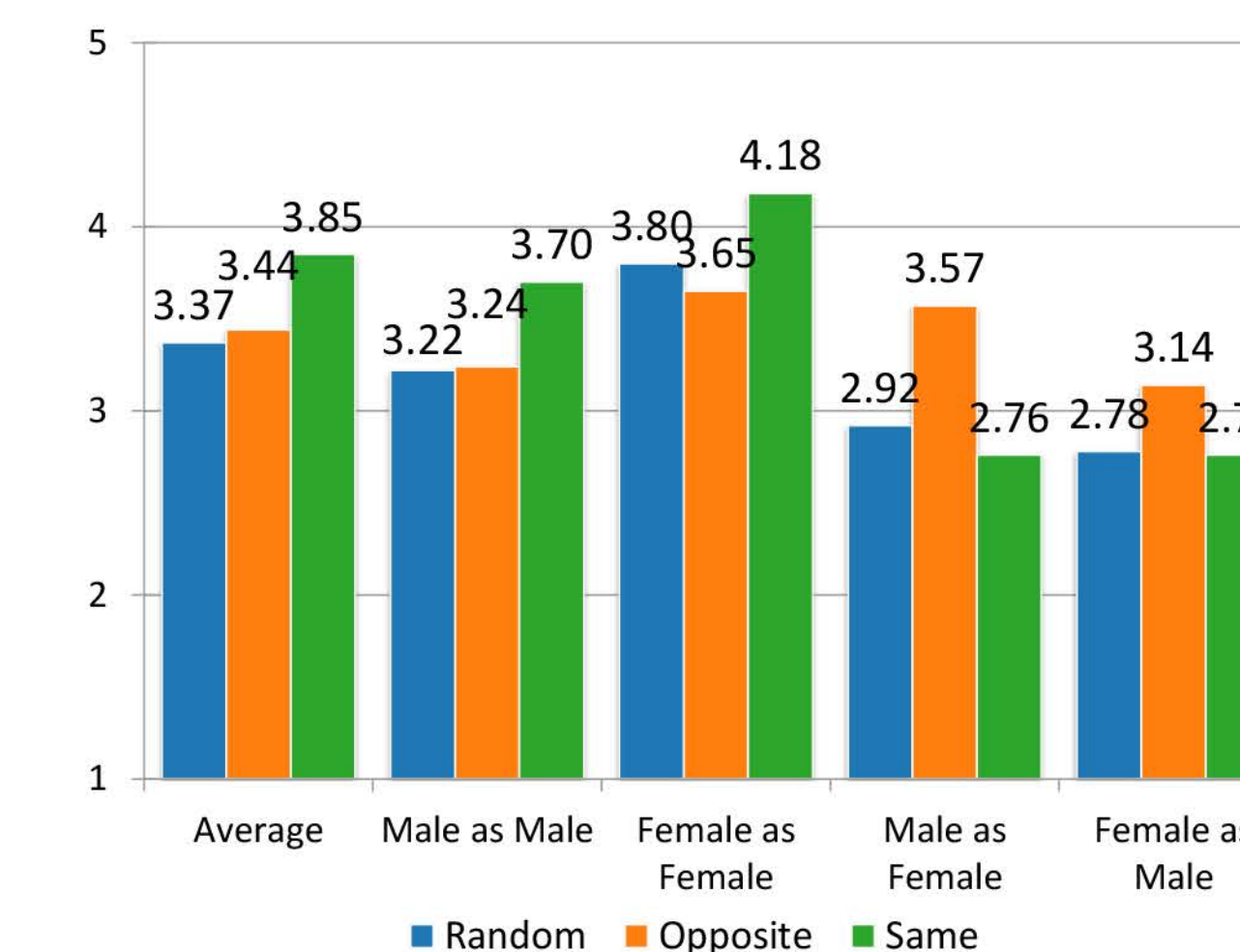
Source: CodeProject

GENDER

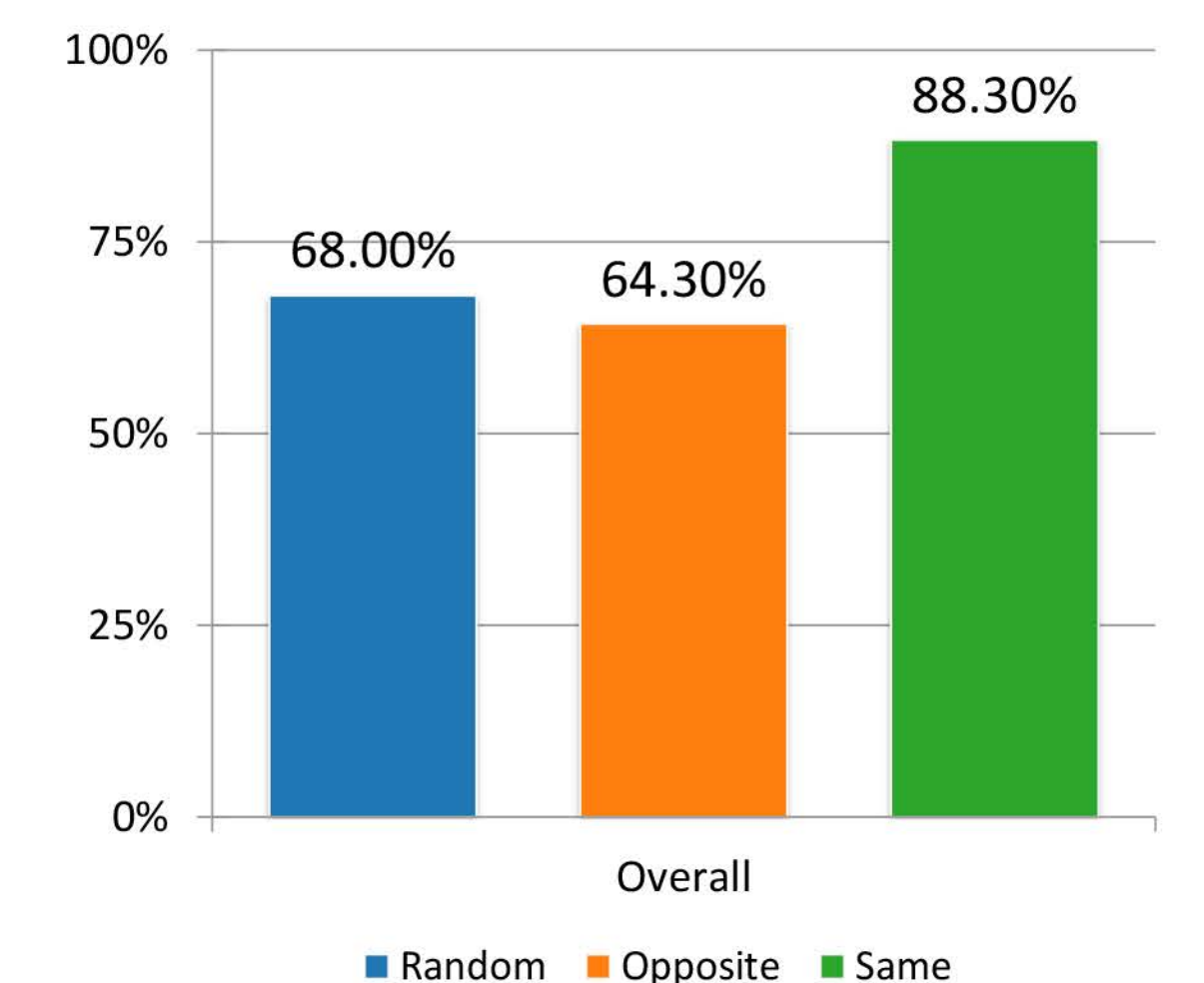
ACCURACY



CONFIDENCE

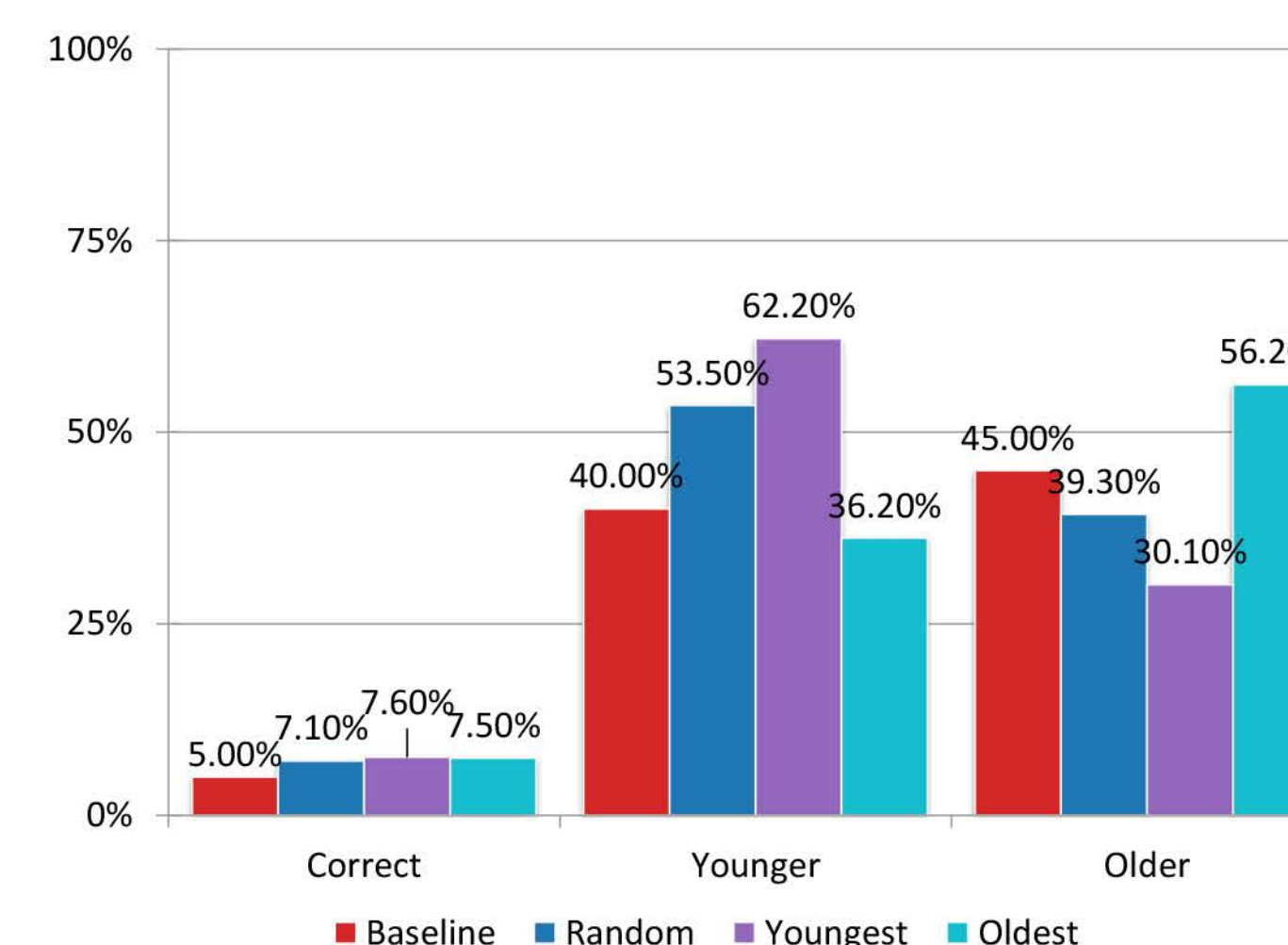


INTER-ANNOTATOR AGREEMENT

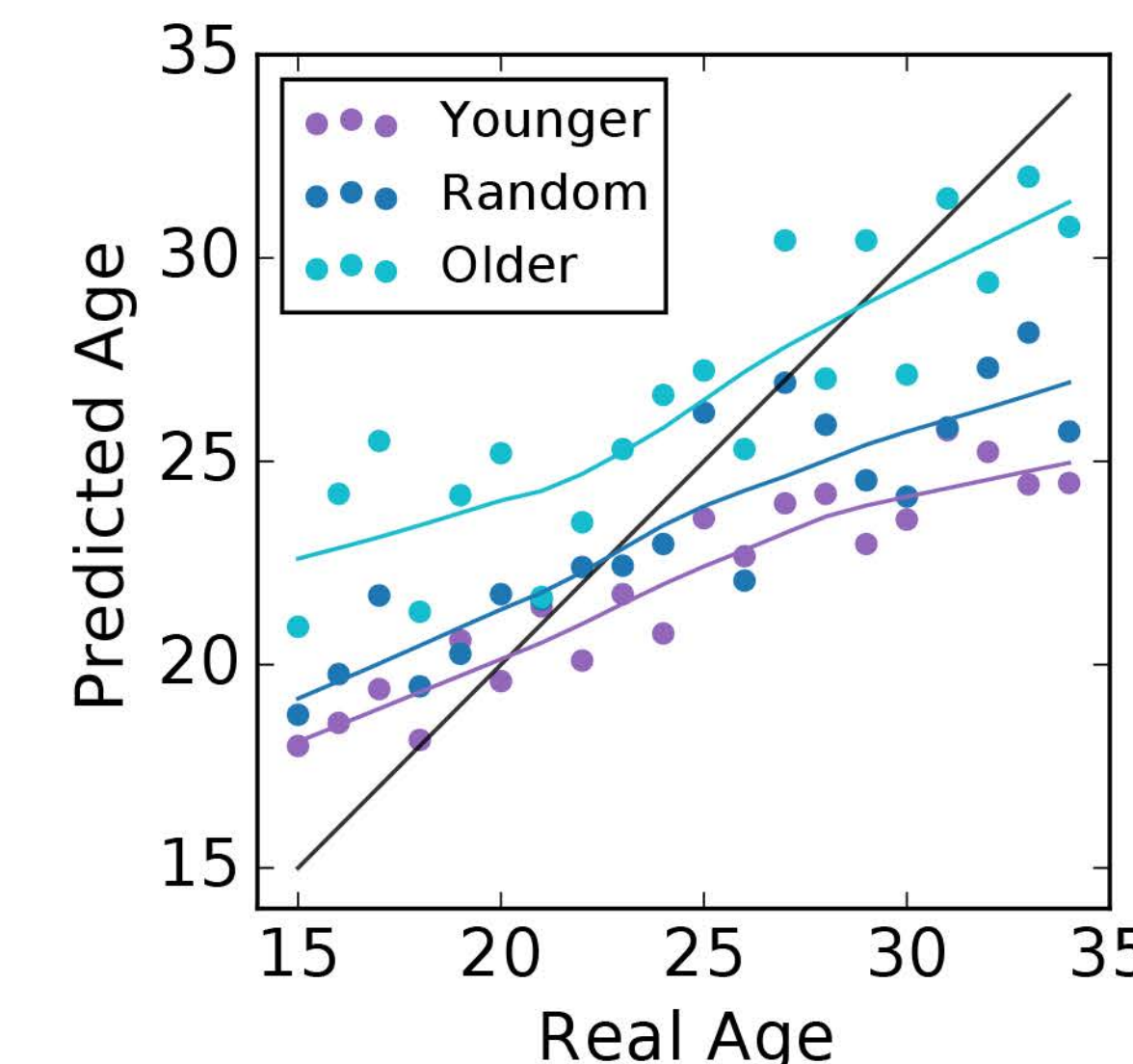


AGE

ACCURACY



PREDICTIONS

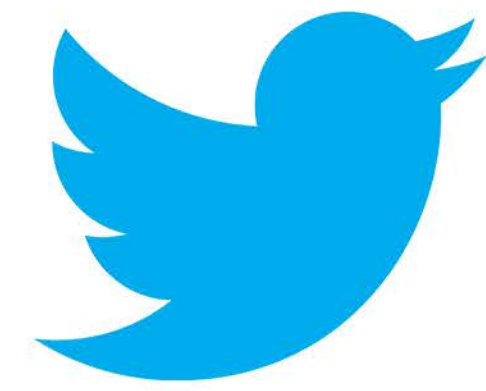


MISLEADING FEATURES*

Youngest
literally so though excited guys - that's literally living the dream
- im laughing so hard
- You cute though
- IM SO EXCITED URL
- you guys killed it USER

Oldest
daughter years via ago ok - USER makes my 2-month-old daughter stop fussing :)
- i love [...] regretting everything from like three years ago
- Christmas is almost here! Let's party! URL via USER
- One year ago today URL URL
- I'm OK with that. URL

* regression/classification weight with the user-normalized average frequency of the feature in the displayed tweets



PREDICT
GENDER/AGE
(Sap et al. EMNLP 2014)
Linear SVM Models

amazon
mechanical turk
beta
3 ratings/setup

Random 20 Tweets

Predicted **Same**
Gender (20 Tweets)

Predicted **Opposite**
Gender (20 Tweets)

Youngest Predicted
Age (20 Tweets)

Oldest Predicted
Age (20 Tweets)

PredictAgeGender @alteration - Nov 21
The problem contains the fucking solution.

PredictAgeGender @alteration - Nov 20
You are my muse. You are my distraction. My rhythm and blues.

PredictAgeGender @alteration - Nov 17
A woman's intuition is a magical thing.

PredictAgeGender @alteration - Oct 31
Time you enjoy wasting is not wasted time.

PredictAgeGender @alteration - Oct 17
I hustle hard in any hustle that you pitch. <URL>

PredictAgeGender @alteration - Oct 13
Ran into tha homie. Such an amazing day.

PredictAgeGender @alteration - Mar 13
The part where I literally was going to tweet that same exact thing just now

PredictAgeGender @alteration - Mar 10
Grateful for this beautiful life... <URL>

PredictAgeGender @alteration - Feb 28
Bout to set it off. Weekend gon be poppin. <URL>

PredictAgeGender @alteration - Jan 18
ItYou always manage to remind me that I did the right thing. For that I should be grateful.

*200 different users for each experiment
- For gender, equal male/female
- For age, stratified in 15-35 age interval
All tweets from 2015 only
Self-reported gender and survey-assessed age (in 2015)

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