Text-mining Social Media to Study Mental and Physical Well-being

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What psychological factors drive well-being? And how can social media measure them?

wwbp.org
Method

Volunteer Data

social media messages

attributes
- gender
- personality
- location
- health
...

exploration (visualization)

linguistic feature extraction

n-grams

topics

correlation analysis

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Predict and understand well-being

- **Individual personality and well-being**
  - 70,000 Facebook users posts
  - Age, sex, personality questionnaire results

- **Community well-being**
  - Billions of tweets, mapped to county
  - County-level happiness and disease rates
Males
Females

love <3 hun girlies hun sweetie sweetheart love ;D sooo excited tomorrow sooo satisfying excitement yay i'm so her_new best_friend chocolate hers he she she <3 sister proud_of my_hair can't_wait ugh am_so baby baby boyfriend so_happy so_happy so_happy lovely so happy sooo yay ! :( i miss yummy like_it_on much_fun cute happy years st birthday loving supportive loving family friends blessed grateful lucky amazing husband thankful boyfriend daughter boyfriend wife love_him soooo so much wishes_she cleaning wishes_she clean wish_him husband loved soooo omg bestie : ) hacked par bestfriend par bf i ly boyfriend =] brother daughter special sister niece son turns nephew celebrate cute baby sweet sooo adorale cute baby sooo cutest_husbands cutest_puppies he's aww awww he's sooo lil aww awww
Twitter predicts SWL

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Twitter Predicts CVD

Accuracy of County-Level ACHD Predictions (Pearson r with CDC-reported ACHD)
Predictors of CVD

Higher Status Occupations

Negative Relationships

Disengagement
Twitter predicts CVD
Thank you!!!

Questions?

extraversion

neuroticism

More at wwwbp.org