CS 8803 Data Analytics for Well-being:
Data Modeling V

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Unraveling abstinence and relapse: smoking cessation reflected in social media

Summative Findings

	S	R
Vol_B***	412	1243
Vol_A***	771	3551
Burst_B***	4.46	10.12
Burst_A***	4.28	10.94
Freq_B***	9.91	3.56
Freq_A***	11.25	2.70

	S-R Before	S-R After
Friends/Tweet	0.0948***	0.1340***
Followers/Tweet	0.0400**	0.0608***

	S-R All_ Before	S-R All_ After	S-R Smoke_ Before	S-R Smoke_ After
% Tweets with @Mentions	0.0529*	0.0396*	-0.0007*	-0.0005*
Unique @Mentions/Tweet	0.0675*	0.0313*	-0.0007*	-0.0007*

	S-R All_ Before	S-R All_ After	S-R Smoke_ Before	S-R Smoke_ After
Pos. Sent. Intensity	0.0850**	0.0569*	0.0009	-0.0029**
Neg. Sent. Intensity	-0.0010	-0.0031*	0.0002	0.0003
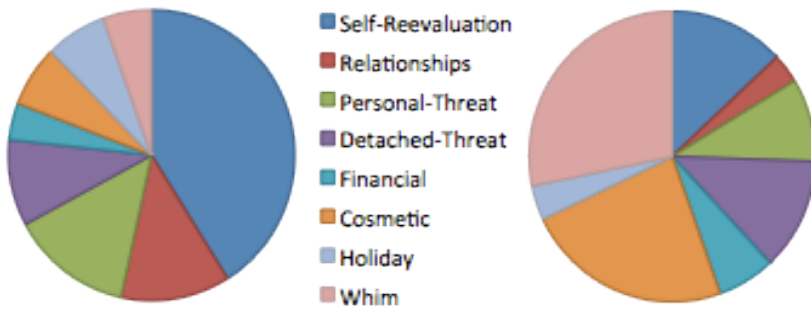
Figure 4. Motives of users who abstain (left) and relapse (right)

Self-Reevaluation, Relationships, Personal-Threat, Detached-Threat, Financial, Cosmetic, Holiday, Whim

Figure 6. Proportion of the cessation process spent in each stage of change for Survivors (top) and Relapsers (bottom).
Pre-Contemplation, Contemplation, Preparation, Abstinence (Action & Maintenance)

Cold Turkey, Medication & E-Cigs, Lifestyle Overhaul, Avoidance & Substitution, Group, Self-Help & Alt. Therapies
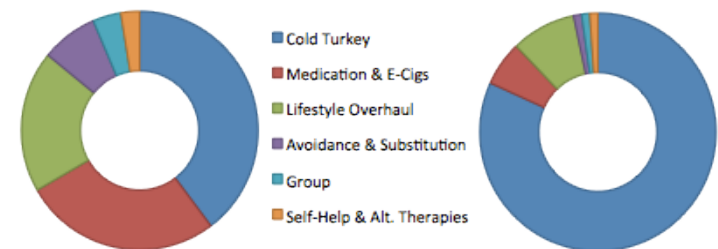
Figure 7. Cessation strategies for smokers who successfully abstain (left) and those who relapse (right)

Detection of Cyberbullying Incidents on the Instagram Social Network

Defining Cyberbullying

- Authors define cyberbullying to consist of three main features: (1) an act of aggression online; (2) an imbalance of power between the individuals involved; and (3) it is repeated over time.
  - The power imbalance can take on a variety of forms including physical, social, relational or psychological.
  - Repetition of cyberbullying can occur over time or by forwarding/sharing a negative comment or photo with multiple individuals.

Findings


Is there any cyberaggressive behavior in the online posts? Mark yes if there is at least one negative word/comment and or content with intent to harm someone or others.
- No
- Yes

Is there any cyerbullying in the online post? Mark yes if there are negative words and or comment with intent to harm someone or other, and the posts include two or more repeated negativity against a victim that cannot easily defend him or herself
- No
- Yes
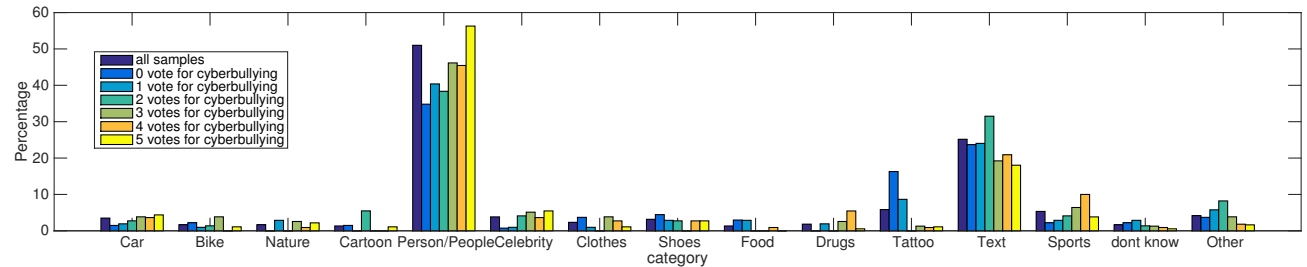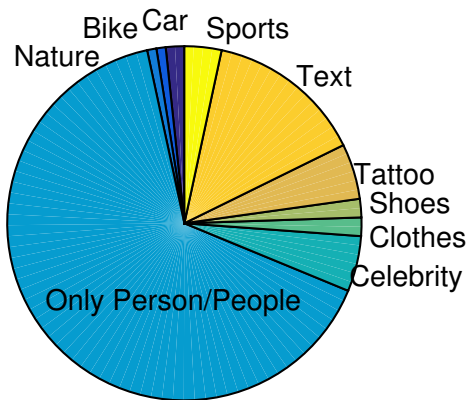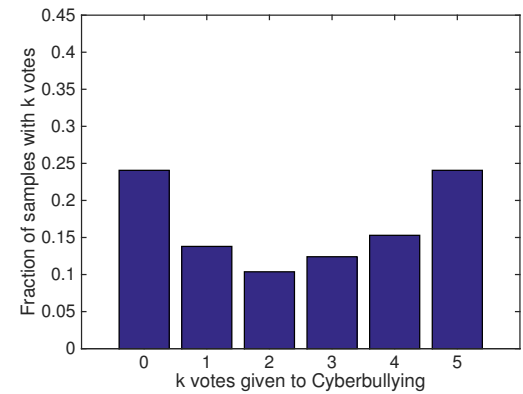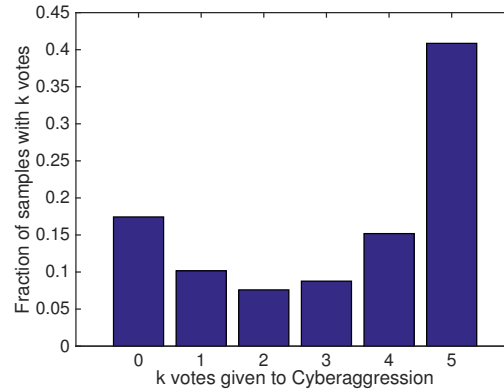
Murnane et al. focused on those Twitter users who had announced their desire to quit. Could this include possible bias? What can you do to circumvent such bias?

Contrast Murnane et al. with the collective smoking paper by Christakis et al.

Murnane et al. used Mechanical Turk to obtain labels on cessation motives and the difference goal setting stages (TTM). What are the benefits of this approach? Its limitations? What is an alternative approach?

What could be the possible reason behind relapsers being heavier posters? Among those who announce a desire to quit, there are more eventual relapsers than survivors. What could explain this?

Aside from smoking cessation, in what kind of other contexts could you apply the method in Murnane et al.? Where can you not apply it?

Can the method outlined in Murnane et al. be used to predict survival and relapse to smoking? If so, how?

Hosseinmardi et al.'s dataset from instagram used an initial candidate filtering approach in which media posts with high profanity/ negative words were considered. What are its benefits? Its limitations?

The crowdsourcing task showed Crowd Flower workers the "media session" and asked them if it indicates cyberaggression and cyberbullying. What limitations do you see to this approach?

Hosseinmardi et al. use public Instagram data. Could this be incorporating systematic bias in the analysis of cyberbullying? If so, what is it and how would you resolve it?

Is Instagram the right place to study cyberbullying?

If you were to do either or both of the studies with anonymous geotagged social media like Yik Yak, what would be the benefits? What would be the limitations?

What kind of interventions are possible given the findings in the two papers?