

Perception is more important than reality: how social media users' perceive depression and suicide?

Context:

An increasing number of users are exploiting online social services to voice thoughts of depression and suicide. Although talking about "suicide" is at the top of the American Association of Suicidology's list of suicide warning signs (Joiner, 2010), it remains very tough to assess urgency when a suicide ideation is expressed on social media. This is mainly due to the huge number of noise caused by spam, sarcasm and irony posts.

The aim of this internship is to unveil the main factors that characterize depressive users' activities on social media websites.

Research questions:

- What are the most popular types of information published by depressive/suicidal (or merely users that publish about suicide)? (For instance, following news, deaths, crisis, etc.)
- Is there any links between posts on social media (eg., twitter) and stories of celebrity suicides (or other entities on Wikipedia) ?
- What are the apparent factors that affect the emotions and mental health of users?
- How to contextualize tweets/microblogs (put them into their context), in order to filter out noise?

Methodology

- An exploratory analysis to extract the most prominent features that characterize suicide related posts
- A correlation analysis between the identified features
- Apply NLP to recognize sarcastic and ironic sounding semantics or slang words and sentences in text
- Apply ML (eg., deep learning methods) to distinguish between posts that jokes about suicide and depression and actual threats or cries for help

Required skills:

A good experience with Java, R (or Python). A Knowledge in statistics is much appreciated.

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