

Signs of Bipolar Disorder in Social Media Text

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Motivation

How does everyday language reflect basic social and personality processes?

Motivation

How does everyday language reflect our mental health?

Meet Fynn

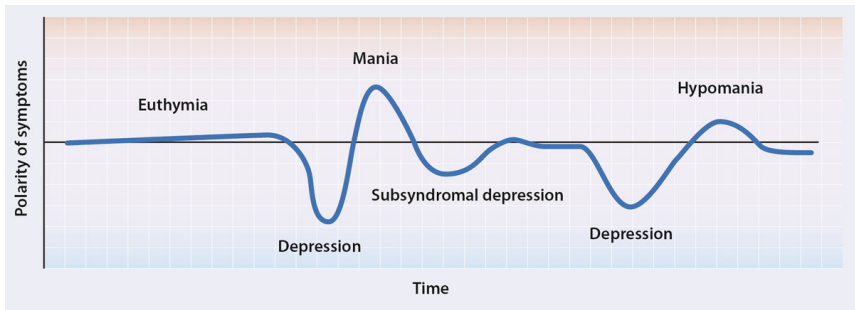
Fynn is just someone relateable. Feeling a bit down this weekend, goes out next weekend

Explain with illustrations

Meet Sophie

Sophie doesn't wanna go out for months. Then spends her entire savings in two weeks of travelling, clubbing, drug usage and sleep deprivation.

Bipolar disorder



Affects 60M people worldwide, 6% suicide rate

I don't like the picture, might draw one myself

Where is NLP?

Imagine they both write **blogs**, or they **Tweet**, or are active **Redditors**



How can NLP help?

- Language analysis of authors with mental health issues
- Provide deeper understanding of illnesses
- Early detection

Language analysis

Compared to mentally healthy:

- *I-talk* – in line with research on depression
- *affect* – increased usage of affect-related words
- *health* – more talk about health
- *pronoun usage* – reflects standings in social hierarchies

Binary classification: **86% accuracy**

Emotion-expressive words through time

Variation of emotion-related features in weekly/monthly chunks # create simple table for that

Goal: detect manic and depressive episodes

Current limitation: labels are on user-level

Current work

- **Time-aware** vs time-agnostic models for classification
- Autoencoders for time-series
- # Nikos' figure of clustered time-series?
- Manually label manic and depressive episodes

Thank you!