

Personality profiling in Online Social Networks: Applications and Opportunities

INTRODUCTION

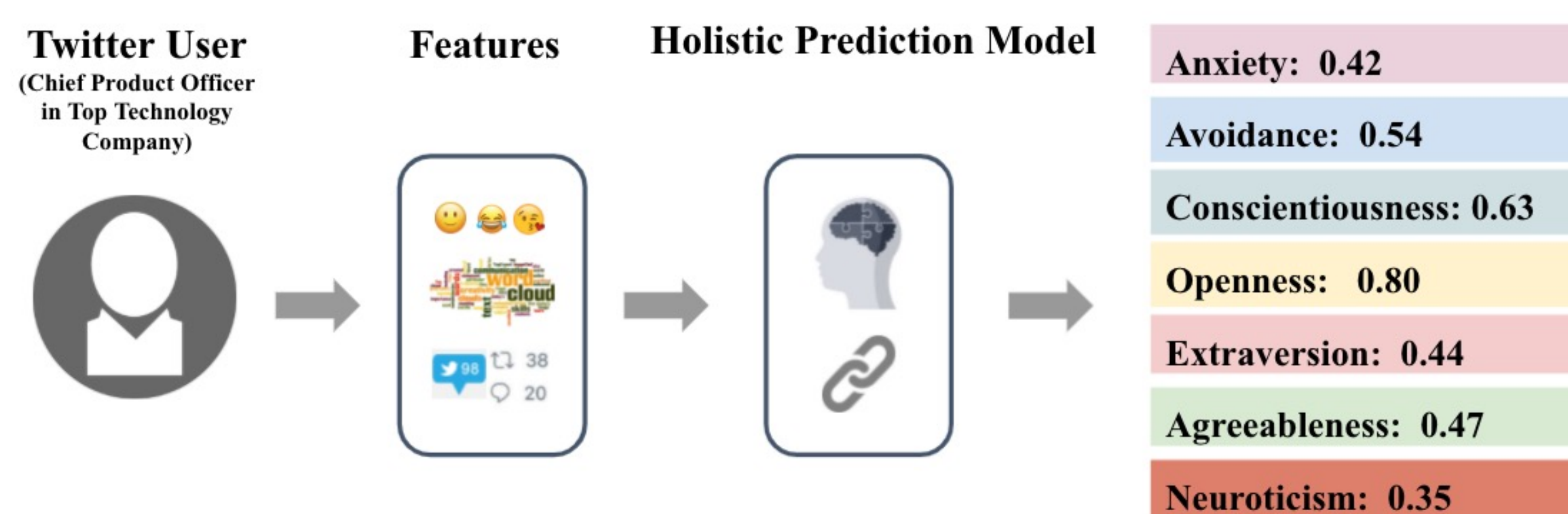
Users in Online Social Networks (OSN) leave traces that reflect their personality characteristics in a continuous digital reflection of the real (offline) world.

We capture users' **language, behavioral** and **emotional expressions** to target more **generic psychological profiling**.

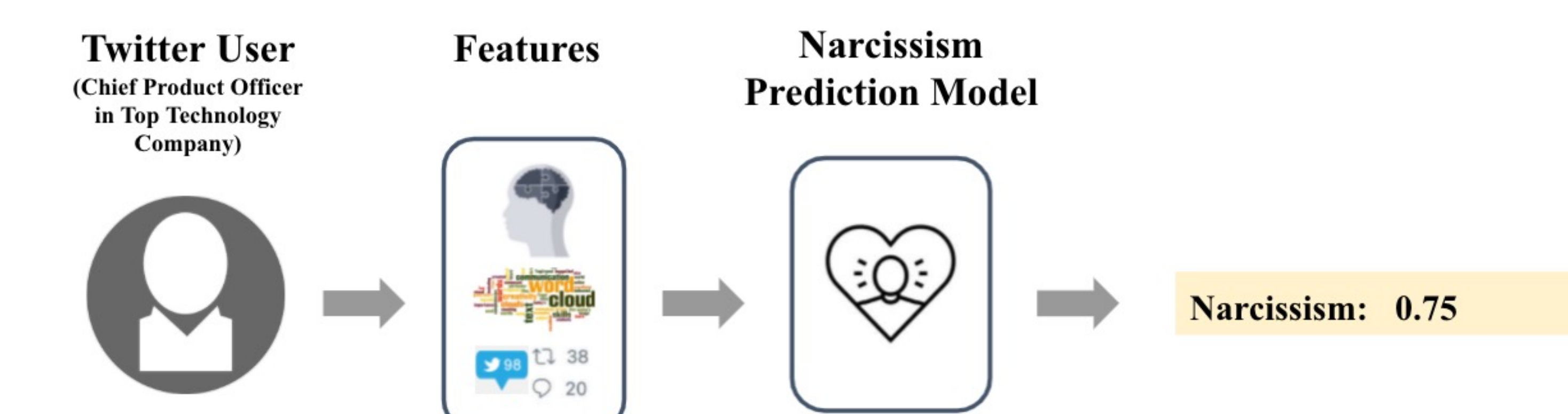
We utilize personality characteristics in the prediction of other traits employing a **chain approach** achieving state of the art results.

METHODS

Detecting Big Five and Attachment styles (Holistic Personality Profiling) in Twitter



Detecting Narcissism in Twitter



Identify each task's needs and goals to employ relevant psychological traits able to provide meaningful insights.

Lessons learnt:

- ✓ unbiased ground truth acquisition
- ✓ model's transparency
- ✓ interpretable results

More info:
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APPLICATIONS

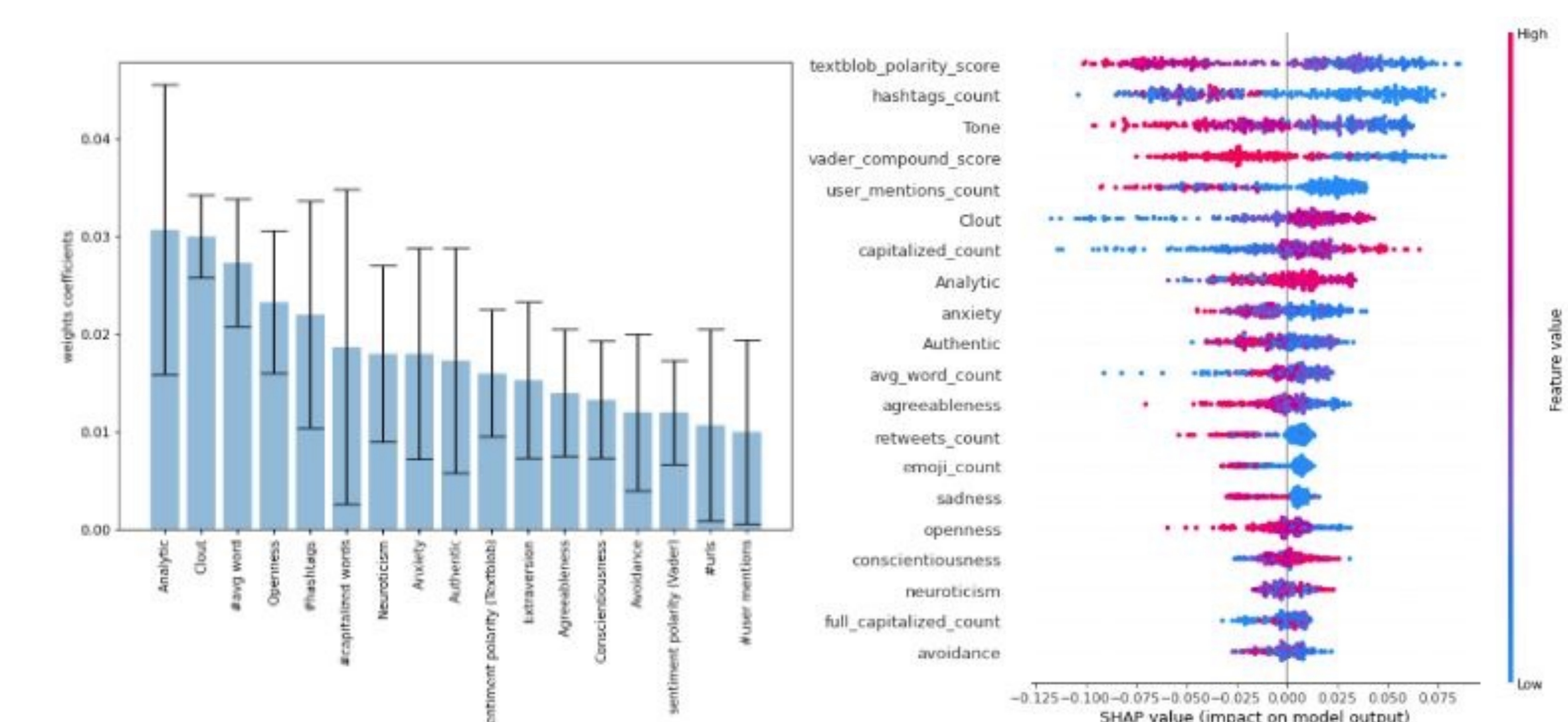
Narcissistic Tendencies of Organizational leaders

- ✓ Leaders' narcissism is associated with organization fundraising success
- ✓ Narcissistic leaders attract more anxious followers in times of uncertainty



Personality profiling of fake news spreaders

- ✓ Explainable fake-news-spreader classifier is built based on psychological and behavioral cues
- ✓ Openness, Neuroticism and Anxiety are among the top 10 features to classify a user as a fake news spreader



(a) Top features importance by ELI5.

(b) The summary plot of the most important features by SHAP

Fig. 1 Features importance in fake news spreaders classifier