



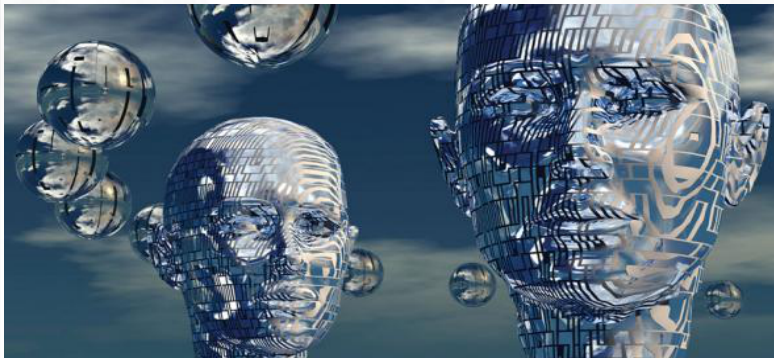
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Information Veracity

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Research



Analyze *Form, Style and Content* of User Data

Credibility

Trustworthiness

Objectivity

Perspective

Emotions

Opinions

Bias

Preferences

Authority



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Information Veracity

➤ Motivation

- 86% of online users concerned about information *veracity*, more than a 3rd agreeing that information is not *trustworthy*
- Subjectivity, bias, prejudice, mis-representation, flawed judgement *etc.* corrupt information veracity

➤ Objective

- Analyze the *joint interaction* between user *trustworthiness*, *objectivity* of their posts and *credibility* of statements therein

➤ Application

- Extract (rare) side-effects of drugs from user postings in health community



Language Stylistic Features

Naive User

“I heard Xanax can have pretty bad side-effects. You may have peeling of skin, and apparently some friend of mine told me you can develop ulcers in the lips also. If you take this medicine for a long time then you would probably develop a lot of other physical problems. Which of these did you experience ?”



Language Stylistic Features

Naive User

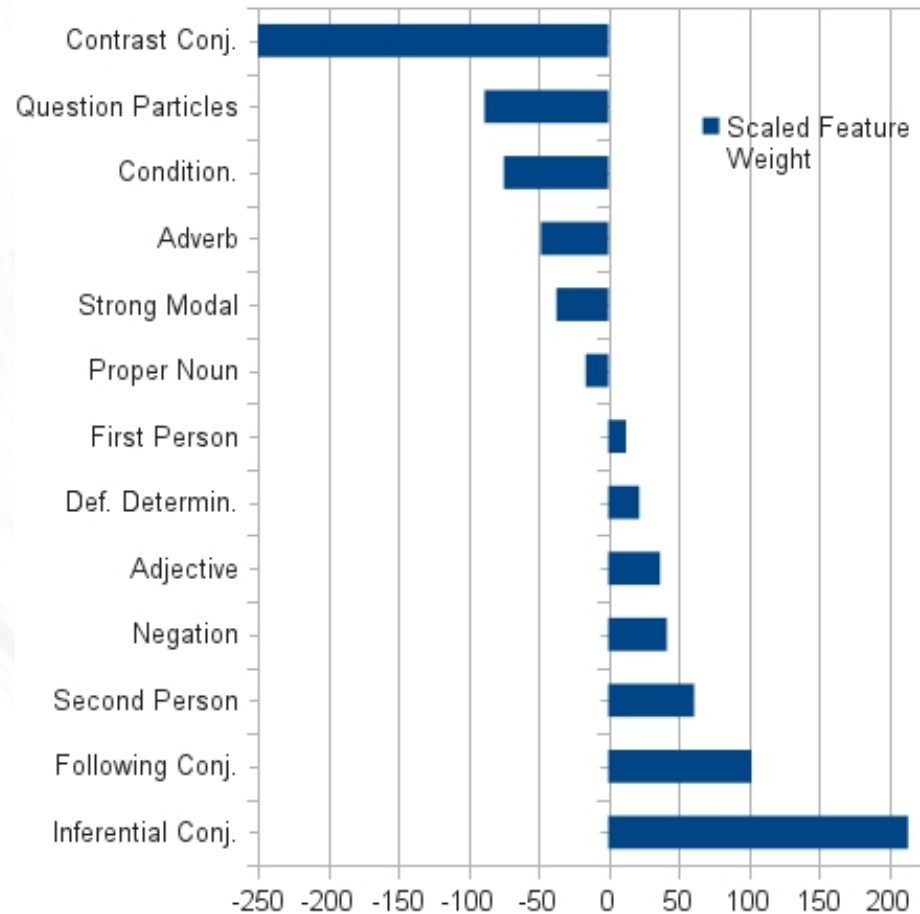
“I heard Xanax can have pretty bad side-effects. You may have peeling of skin, and apparently some friend of mine told me you can develop ulcers in the lips also. If you take this medicine for a long time then you would probably develop a lot of other physical problems. Which of these did you experience ?”

Expert User

“Depo is very dangerous as a birth control and has too many long term side-effects like reducing bone density. Hence, I will never recommend anyone using this as a birth control. Some women tolerate it well but those are the minority. Most women have horrible long lasting side-effects from it.”



Stylistic Feature Importance for Credibility



Language Affective Features

Naive User

“I’ve had chronic depression off and on since adolescence. In the past I’ve taken Paxil (made me anxious) and Zoloft (caused insomnia and stomach problems, but at least I was mellow). I have been taking St. John’s Wort for a few months now, and it helps, but not enough. I wake up almost every morning feeling very sad and hopeless. As afternoon approaches I start to feel better, but there’s almost always at least a low level of depression there throughout the day. ”



Language Affective Features

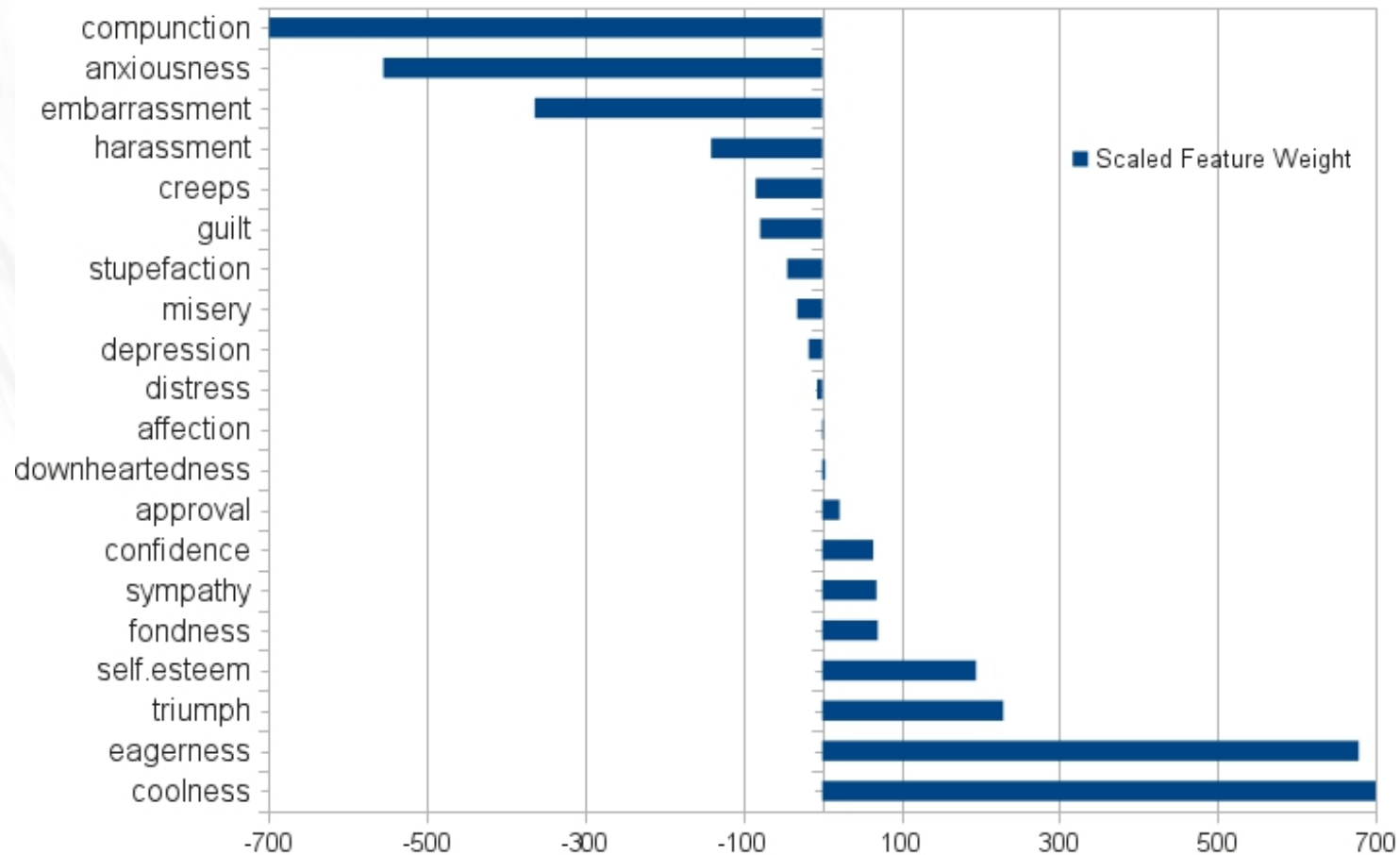
Naive User

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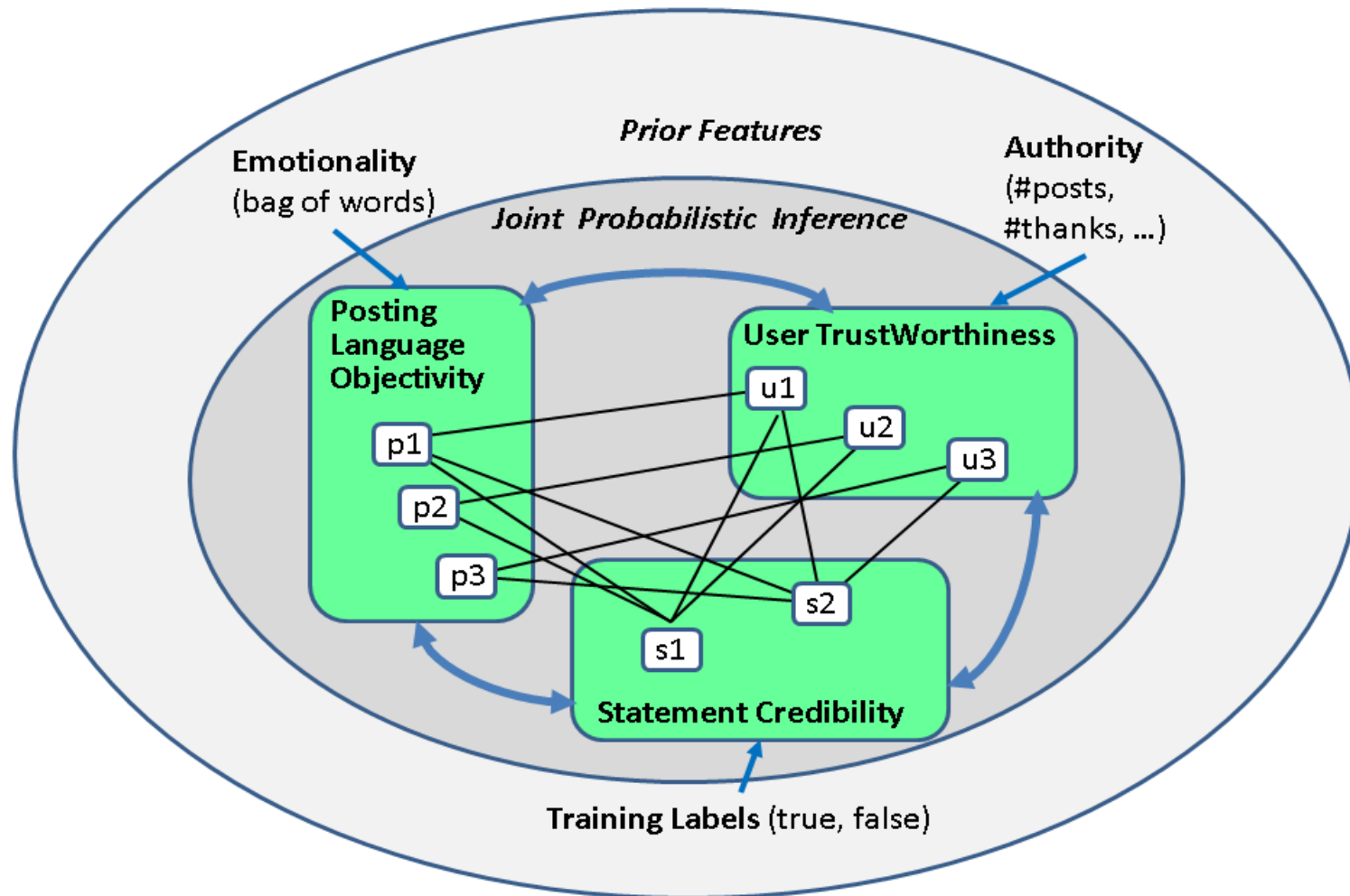
Expert User

“ A diagnosis of GAD (Generalized Anxiety Disorder) is made if you suffer from excessive anxiety or worry and have at least three symptoms including ... If the symptoms above, touch a chord with you, do speak to your GP. There are effective treatments for GAD, and Cognitive Behavioural Therapy in particular can help you ...”

Affective Feature Importance for Credibility



Joint Interaction – *Users, Language, Statements*



Trustworthy users write objective posts bearing credible statements, that agree with other trustworthy users.