Proposal: Evaluating & Predicting the Reliability of Redditors

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1 Introduction

Reddit, the self-proclaimed "Frontpage of the Internet", is a website containing entirely user-contributed, uncurated content organized by topic. Over the past few years, Reddit has gained prominence within popular media channels for various reasons, all surrounding the content submitted by Reddit users, or Redditors.

Redditors can be extremely engaged and reliable, and therefore useful as sensors. In this paper, we propose a method of determining if Redditors are reliable based on their post and comment history, as well as the reaction of the community to their activity. Furthermore, the resulting analysis can be used to create a predictor of future Redditor activity. For example, this would allow for the creation of nudges to encourage users who demonstrate potential dependability to turn them into actual, reliable users - and conversely, discourage unreliable users from posting on Reddit, increasing the net dependability of the site.

1.1 Why Reddit?

Reddit is quickly becoming a larger and larger social network, and much of its potential remains untapped. It is unique among social networks for a few reasons, the combination of which make it attractive for study and use as a sensor network.

Though more things can be posted, Twitter is primarily used for text. Instagram is for photos, and Vine is for videos. Reddit, however, is extremely content agnostic; Users post photos, links, videos, and text, relating to a variety of topics. Twitter caps users at 140 characters, Reddit does not. Facebook is mostly private content, Reddit is largely public. Reddit also comes with the built in benefit of content being organized by subject matter, into various 'Subreddits'. In this way, many positive user behaviors are already encouraged, like posting content in the proper Subreddit.

1.2 Finding Reliable Users

There are some issues with Reddit that are less present in social networks like Twitter. For instance, Twitter has verified accounts, and if the verified account `@cnn` tweets something, one can be relatively sure it is researched and vetted information which is likely to be correct. Reddit has no such mechanism, nor accounts for brands or news organizations. Moreover, many Reddit users are completely anonymous and could potentially have multiple accounts, which can cause rise to all sorts of poor behavior. Thus, determining the reliability of users is a challenge not just for most users as it is for Twitter, but for all users.

2 Proposed Work

In light of the issues with Reddit, it is valuable to determine the reliability of Redditors automatically. We plan to do this by creating a Reliability Score, ranging beetween -1.0 and 1.0, in which a more positive number denotes a user who is more reliable, and a negative score denotes a user who is less reliable. Furthermore, we hope to show that based on indicators used to calculate this score over time, that we can anticipate the trend of a Redditor's reliability. This has implications in creating reliable users by predicting their trajectory of behavior. One could take this trajectory, compare it to a more 'desirable' trajectory, and perhaps even nudge Redditors towards a more Reliable trajectory.

The following sections discuss some technical challenges we anticipate, and our plans to overcome them.

2.1 Creating A Reliability Score

Talk about:

1. Relibility Karma vs overall karma
2. Posting in trusted subreddits
3. Posting reliable sources
4. Others
5. Fusion method

2.2 Gathering Usernames

Reddit does not have an API for gathering or searching for usernames. It does however, allow one to see popular posts on particular Subreddits, or in general, the front page. We plan to mine usernames by looking at popular posts and comments on those posts, and logging the usernames associated with those activities. This list of usernames can then be plugged into our reliability score calculations, and used to train our classifiers for behavior prediciton.

2.3 Verification

Verification of reliability is tricky. Though it is labour intensive, we will have to select a control group of users, view their history manually, decide if they are 'reliable' or not, and then compare that to the score our classifier gives.

Verification of behavior prediction is less tricky. We can simply use our models to predict the future behavior of old users, and then compare that to their actual trajectory.

3 Proposed Milestones

Milestone	Date
Abstract	Sep 15
Introduction	Oct 15
Current Work	Oct 15
Challenges Faced	Nov 15
Open Challenges	Nov 15
Conclusion	Nov 15
References	Nov 15
User List Data Grab	Oct 15
User Ground Truth	Oct 20
User Characteristic Grab	Nov 5
Classifier Written with Characteristics	Oct 20
Data Run	Oct 25
Data Analyzed	Oct 31
In-class Presentation 1	Nov 1
In-class Presentation 2	Nov 20