Problem Statement 1

Friend Affinity Finder

We live in the age of social media. Last few years have seen active and animated social engagement from all strata of society, which has led to explosion in information sharing. We have now more friends than anytime earlier, thanks to various social media platform like Facebook, Instagram, LinkedIn, Twitter and many more. It is therefore important and appropriate to understand more about the commonalities that we share with our friends in terms of their behavior, choices, likes and dislikes and so much more.

The problem statement can leverage on the *Big Five* personality characteristics which represent the most widely used model for generally describing how a person engages with the world. The model includes five primary dimensions:

- *Agreeableness* is a person's tendency to be compassionate and cooperative toward others.
- *Conscientiousness* is a person's tendency to act in an organized or thoughtful way.
- *Extraversion* is a person's tendency to seek stimulation in the company of others.
- *Emotional range*, also referred to as *Neuroticism* or *Natural reactions*, is the extent to which a person's emotions are sensitive to the person's environment.
- *Openness* is the extent to which a person is open to experiencing different activities.

Each of these top-level dimensions has six facets that further characterize an individual according to the dimension. For detailed learning refer to the links under resources.

Problem Description

The problem statement can be broken into the following segments:

1. Infer personality characteristics from textual information such as tweets, social media interactions, and other digital communications.
2. Analyzing nature of different people and mapping it with ours, to understand them better and finding commonalities for a healthy relationship, driven by needs and values.
3. Gain insight into how and why people think, act, and feel the way they do, which can help in shaping our responses towards them in more informative and cordial way.
4. Identify the user's inclination including his coding interest, programming language choices, music interest, shopping preferences etc. from his digital footprint including information available from Reddit and Stack Overflow.
5. Build a machine learning model from the features extracted from the personality information using Big Five personality characteristics to perform a data visualization to classify your friends

Expectation

The web/mobile application should be able to analyze personality traits of people and based on this should be able to get insight about their inclinations, choices and commonality with the other people associated with them. The solution can leverage social media platforms to access publicly accessible information or use authentication from legal users for access to information available on social networking platforms.

Evaluation Criteria

The evaluation parameters are listed on the hackathon landing page.

Tools & Technology

1. Python 2-3, IBM Cloud Utilities Python Environment.
2. Watson services like Personality Insights, NLU, Tone analysis available on IBM Cloud

Resources & References

- https://cloud.ibm.com/docs/services/personality-insights?topic=personality-insights-science#science
- https://personality-insights-demo.ng.bluemix.net/
- https://cloud.ibm.com/docs/services/personality-insights?topic=personality-insights-models
- https://developer.ibm.com/tutorials/cc-cognitive-watson-extract-insights-spark-dsx/
- https://cloud.ibm.com/docs/services/personality-insights?topic=personality-insights-references#golbeck2011

Frequently asked questions

Q: What are the programming languages?
A: Python
Q: What are mobile platforms allowed?
A: Any
Q: Where to get free access to IBM Cloud?
A: Sign up on - https://www.ibm.com/cloud/
Q: Is there any documentation available to use IBM Cloud?
A: Yes, each service comes with elaborate documentation with step by step illustration to use the services available on IBM cloud, follow the VIEW DOCS, link available on each service.
Q: Is the knowledge of ML/DL is required?
A: No
Q: Is there any dataset provided?
A: No, there is no dataset made available with this problem statement. You can get data available in public domain or get your friends to authenticate application to get access to their data from various social platforms.

Post your technical queries here.