**PERSONALITY PREDICTION**

**DEFINITION**

Personality is a way person respond to a particular situation. It is combination of characteristics that make an individual unique. Assessment of personality over the past two decades in various researches has revealed that personality can be defined by five dimensions known as Big Five personality traits. (OCEAN Model).

In general, study of personality considered as a psychology research based on the survey or questionnaire. But this limits the research data to less number of persons. Hence there is a need of something through which we can increase the number of people involved in survey and to make the process automated.

**Data from Online Social Networking Sites provides a solution to this problem. The rapid growth in social media increased people perceptions towards it**.

The interaction pattern, profile data, text or multimedia content used during conversation or status update provide lot of raw data to researchers which can be used to determine personality traits.

Here, we have used Big Five Personality traits for our project and they are

**Openness,** **Conscientiousness, Extroversion, Agreeableness, Neuroticism.**

Personality prediction and Machine Learning

With the availability of high-dimensional and fine-grained data about human behaviour, it becomes too handy to research and observe human behaviour. Using mobile sensing studies, data collected from our day-to-day activities have drastically altered how psychologists perform research and undertake personality assessments. Machine learning models are a boon to researchers and are used to learn highly complex relationships and evaluate their generalizability and robustness using the resampling method. It has the potential to transform research and assessment in personality psychology. Algorithms can handle vast datasets, including thousands of attributes. As well, ML algorithms are highly efficient in recognizing patterns in datasets that humans cannot even perceive. The use of these ML models can lead to better, more objective, and automated personality assessments.

People interact and express their likes, thoughts, feelings, and opinions on social media, capturing their personality traits. Machine Learning models have been actively using such a wide range of data to predict individuals’ Big Five (OCEAN) personality traits.

Personality Prediction using Social Media

In recent years, social media such as Facebook, Twitter, Instagram and Linkedin have become some of the most popular destinations for internet users. Social network activities provide an excellent platform for researchers to study and understand someone's online behaviours, preferences, and personality. Different personalities are related to forming different social relations and interaction behaviours on status preferences.

Now, we got to know the basics of Personality Prediction, let’s get dive into discussion of predicting the Big Five personality traits using a dataset.

**Project:**

Myers Briggs classification problem

The Myers Briggs Type Indicator (or MBTI) is a personality type system that divides everyone into 16 distinct personality types across 4 axis:

Introversion (I) – Extroversion (E)

Intuition (N) – Sensing(S)

Thinking (T) – Feeling (F)

Judging (J) – Perceiving (P)

So for example, someone who prefers introversion, intuition, thinking and perceiving would be labelled an INTP in the MBTI system, and there are lots of personality based components that would model or describe this person’s preferences or behaviour based on the label.

Here, we done the following process for our model:

* Importing the needed Modules.
* Importing the dataset (personality types showing their last 50 tweets).
* Checking for the null values.
* Exploratory analysis on data.
* Checking for co-relations between data using Visualization.
* Building Machine learning Algorithms
* Checking for classification about ones Personality comes under which type (ML discussion).
* Which Model is giving best accuracy.
* Conclusion

By doing all the things above, I observed that we are making the things easy by means of their correlations . In the model I have taken dataset which contains data of tweets of last 50, which are defining their personality through their comments. At first I checked for the null values and checked for correlations in the data , and by correlations I have seen so much of information and the through the info I Preprocessed the data into certain columns and train the data , So we check for the best Algorithms.

At Last I have seen the so called named as ‘DECISION TREE’ gives the best accuracy.

**Conclusion:**

We have identified and outline the key personality traits of different types of people. The biggest takeaways is that personality types does not predict success or future results. What it does predict is your strength and weaknesses in terms of personality. And one of the things I have taken into consideration is that when we creating teams of to fight crime, develop amazing software, or simple play sports. It’s important to consider everyone technical position on the team, but it’s also deeply important to explore one’s own interest to ensure that strengths and weaknesses are balanced.

Which allows another layer of interdisciplinary not only in technical skill set, but also in mindset and personality.