Personality Classification by Suggestion Mining using *textblob, nlp, tweepy and nltk.*

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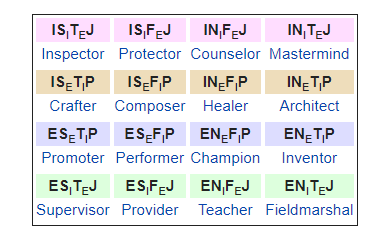
● Uses the Twitter REST API to mine tweets for personality identification.

● Create n-grams and word vectors for the hashtags, emoticons and phrases using NLP techniques like TF-IDF.

● Train the machine to classify the personality types by using a Naive-Bayes Text Classifier.

● Accurately predict the user’s Myers-Briggs personality type using 10-fold cross validation.

In Myer's Briggs Type indicator Classification we have 16 types of personality which can be categorized as :



We will generate a naive bayes classifier models for all 4 different classes. It will generate few scores which will give the training data size and the features used while training the model.

Scales:

* Extraversion (E) – Introversion (I)
* Sensing (S) – Intuition (N)
* Thinking (T) – Feeling (F)
* Judging (J) – Perceiving (P)

**Extraversion (E) – Introversion (I) :**

Extraverts (also often spelled extroverts) are "outward-turning" and tend to be action-oriented, enjoy more frequent social interaction, and feel energized after spending time with other people. Introverts are "inward-turning" and tend to be thought-oriented, enjoy deep and meaningful social interactions, and feel recharged after spending time alone.

**Sensing (S) – Intuition (N) :**

People who prefer sensing tend to pay a great deal of attention to reality, particularly to what they can learn from their own senses. They tend to focus on facts and details and enjoy getting hands-on experience. Those who prefer intuition pay more attention to things like patterns and impressions. They enjoy thinking about possibilities, imagining the future, and abstract theories.

**Thinking (T) – Feeling (F):**

This scale focuses on how people make decisions based on the information that they gathered from their sensing or intuition functions. People who prefer thinking place a greater emphasis on facts and objective data.

They tend to be consistent, logical, and impersonal when weighing a decision. Those who prefer feeling are more likely to consider people and emotions when arriving at a conclusion.

**Judging (J) – Perceiving (P):**

The final scale involves how people tend to deal with the outside world. Those who lean toward judging prefer structure and firm decisions. People who lean toward perceiving are more open, flexible, and adaptable. These two tendencies interact with the other scales.

Remember, all people at least spend some time extroverting. The judging-perceiving scale helps describe whether you extravert when you are taking in new information (sensing and intuiting) or when you are making decisions (thinking and feeling).

Each type is then listed by its four-letter code:

* ISTJ - The Inspector (Introverted, Sensing, Thinking, Judging)
* ISTP - The Crafter (Introverted, Sensing, Thinking, Perceiving)
* ISFJ - The Protector (Introverted, Sensing, Feeling, Judging)
* [ISFP - The Artist](https://www.verywellmind.com/isfp-introverted-sensing-feeling-perceiving-2795991) (Introverted, Sensing, Feeling, Perceiving)
* [INFJ - The Advocate](https://www.verywellmind.com/infj-introverted-intuitive-feeling-judging-2795978) (Introverted, Intuitive, Feeling, Judging)
* [INFP - The Mediator](https://www.verywellmind.com/infp-a-profile-of-the-idealist-personality-type-2795987) (Introverted, Intuitive, Feeling, Perceiving)
* [INTJ - The Architect](https://www.verywellmind.com/intj-introverted-intuitive-thinking-judging-2795988) (Introverted, Intuitive, Thinking, Judging)
* [INTP - The Thinker](https://www.verywellmind.com/intp-introverted-intuitive-thinking-perceiving-2795989) (Introverted, Intuitive, Thinking, Perceiving)
* [ESTP - The Persuader](https://www.verywellmind.com/estp-extraverted-sensing-thinking-perceiving-2795986) (Extraverted, Sensing, Thinking, Perceiving)
* [ESTJ - The Director](https://www.verywellmind.com/estj-extraverted-sensing-thinking-judging-2795985) (Extraverted, Sensing, Thinking, Judging)
* [ESFP - The Performer](https://www.verywellmind.com/esfp-extraverted-sensing-feeling-perceiving-2795984) (Extraverted, Sensing, Feeling, Perceiving)
* [ESFJ - The Caregiver](https://www.verywellmind.com/esfj-extraverted-sensing-feeling-judging-2795983) (Extraverted, Sensing, Feeling, Judging)
* [ENFP - The Champion](https://www.verywellmind.com/enfp-an-overview-of-the-champion-personality-type-2795980) (Extraverted, Intuitive, Feeling, Perceiving)
* [ENFJ - The Giver](https://www.verywellmind.com/enfj-extraverted-intuitive-feeling-judging-2795979) (Extraverted, Intuitive, Feeling, Judging)
* [ENTP - The Debater](https://www.verywellmind.com/the-entp-personality-type-and-characteristics-2795982) (Extroverted, Intuitive, Thinking, Perceiving)
* [ENTJ - The Commander](https://www.verywellmind.com/entj-personality-type-2795981) (Extraverted, Intuitive, Thinking, Judging)

### Suggestion Mining

It can be defined as the automatic extraction of suggestions from unstructured text, where the term *suggestion* refers to the expression of tips, advice, recommendations etc. As proposed by Negi et. Al. The scope of suggestions is limited to explicit suggestions only. These are the sentences for which the surface structure as well as the context conform to a suggestion.

#### Problem Statement

Given a sentence *s*. If *s* is an explicit suggestion, assign the label *'suggestion'*. Otherwise, assign the label *'non-suggestion'*.