PERSONALITY PREDICTION FROM SOCIAL MEDIA

Bhushan Nishane, Suhas Dhole, Atharv Sahare, Aishwarya Kale

SKN Sinhgad institute of technology and science lonavala
Department of computer engineering

ABSTRACT:

Personality is one factor that influences how people connect with others. Personality is a crucial component of a person's actions. People's personalities are determined by how they connect with others. This article discusses Automated Personality Classification, which is a system that analyses a user's personality based on specific traits utilizing Data Mining Algorithms. In this study, a technique for analyzing an applicant's personality is suggested. This technique will be useful for organizations and other agencies who want to hire people based on their personality rather than their technical skills. The Big Five Personality characteristics are used to predict personality, and the categorization is done using the Nave Bayes Algorithm and Support Vector Machine.

I. INTRODUCTION

Social media platforms such as Facebook, Twitter, Google, and Instagram have grown in popularity owing to their simplicity of use and user-friendly interfaces that allow users to begin engaging with others in a short amount of time. In these social networking sites (SNSs), each user is treated as an entity, and each entity is linked to other entities as friends, connections, or followers. Many activities are enabled for users when using these SNSs, such as publishing statuses/tweets, sharing others' posts/retweets, like others' posts, commenting on others' posts, talking directly with friends, and playing online games with friends. It is obvious that online behavior may be portrayed based on user behaviors. Understanding user behavior may aid in the identification of personality traits. Predicting people' personalities using social media digital footprints is a difficult undertaking since the context of detecting personality traits in social media is not trivial. Reviews/opinions regarding a political party, whether good or bad. These sorts of statuses may exhibit contextual patterns, since other users' friends may also be posting similar posts. Given the current trend, users may express their political opinions. Users behave differently on social media than they do in real life.

II. LITERATURE SURVEY

P.S.Dandannavar, "Social Media Text - A Source for Personality Prediction." [1] The use of social media is expanding at an alarming rate. The use of social media sites such as Twitter and Facebook for social contact has also become a widespread trend. It is believed that around 6,000 tweets are sent on Twitter every second. With users spending an average of 35 minutes each day on Facebook, it is estimated that there are around 317,000 status updates posted on Facebook every minute. These massive amounts of data include really valuable information. This data may be studied for a variety of purposes. It is usual

to utilize social media data to forecast user personality. Prediction models that can predict user variables such as age, gender, personality traits, employment, political inclination, and soon have been developed effectively. Personality models, such as the Big Five, have standards in place, DISC and the Myers-Briggs Type Indicator have been the basis for all such personality prediction. A user's social media data can thus be used to predict his/her personality. The main objective of this work is to review the work carried out for personality prediction using social media data

S. Jothilakshmi and R. Brindha are the authors of this article. "Using Frequency Domain Linear Prediction Features for Speaker Trait Prediction for Automatic Personality Perception." [2] The goal of automatic personality perception is to anticipate the speaker's personality based on nonverbal behavior. The speaker attributes utilized for personality evaluation include extraversion, conscientiousness, agreeableness, neuroticism, and openness. In this paper, we offer a speaker trait prediction technique for automatic personality evaluation that uses frequency domain linear prediction (FDLP) technology to explain the link between speech data and personality characteristics. FDLP features outperform other feature extraction approaches.

The SSPNet Speaker Personality Corpus is used for research and evaluation. The suggested technique accurately predicts speaker characteristics with a classification accuracy of 90-99

Bo Wang, Chaowei Li, Jiale Wan "Social Network User Personality Prediction" [3] We gather social data and questionnaires from Weibo users and focus on how to use the user text information to forecast their personality characteristics. We choose the user information using correlation analysis and principal component analysis, and then predict and evaluate the outcomes using the multiple regression model, the grey prediction model, and the multitasking model. It is discovered that the grey prediction model's MAE values outperform the multiple regression model. Multitask model, overall prediction effect between 0.8 and 0.9, overall accuracy of good prediction. This demonstrates that grey prediction in user personality prediction demonstrates good generalization and non-linear ability.

Shipeng Wang, Lizhen Cui, Lei Liu, Xudong Lu, and Qingzhong Li, "Personality Traits Prediction Based on Users' Digital Footprints in Social Networks Using Attention RNN." [4]: Individuals' digital footprints on internet service platforms are becoming increasingly large as social networks gain popularity. As a result, an emerging technique known as personality characteristic analysis has garnered a lot of interest. The prediction and analysis of personality traits is an effective method for voting prediction, review analysis, decision analysis, and marketing. Existing research mainly employ categorization models while ignoring the temporal aspect of digital footprints, which may result in disappointing findings. To improve, this research proposes an effective technique for predicting personality traits that takes temporal aspects into account using an Attention Recurrent Neural Network (At tRNN). The experimental findings based on a dataset of 19000 Facebook volunteers demonstrate that the suggested strategy is effective

"Personality Classification System Using Data Mining," Sandhya Katiyar [5] one factor that influences how people connect with the outside environment is their personality. Personality is a crucial component of a person's actions. People's personalities are determined by how they connect with others. This article discusses Automated Personality Classification, which is a system that analyses a user's personality based on specific traits utilizing Data Mining Algorithms. In this study, a technique for analyzing an applicant's personality is suggested. This technique will be useful for organizations and other agencies who want to hire people based on their personality rather than their technical skills. The Big Five Personality characteristics are used to predict personality, and the categorization is done using the Nave Bayes Algorithm and Support Vector Machine.

Tutaysalgir," Clustering-based Personality Prediction on Turkish Tweets "[6]: In this study, we provide a system for predicting personality characteristics from Turkish tweets. The prediction model is built using a clustering-based technique. Because the model is based on linguistic traits, it is language specific. The prediction algorithm makes advantage of factors specific to the Turkish language and connected to the writing style of Turkish Twitter users. In order to create a personality model from Twitter postings, we employ anonymous BIG5 questionnaire scores from volunteer users as the ground truth. Experiment findings suggest that the constructed model can predict personality features of Turkish Twitter users with very modest errors.

III. PROPOSED SYSTEM

We offer a deep neural network strategy for detecting sarcasm. For training and testing, we employ the SVM algorithm. Through our application, we provide security.

SYSTEM ARCHITECTURE

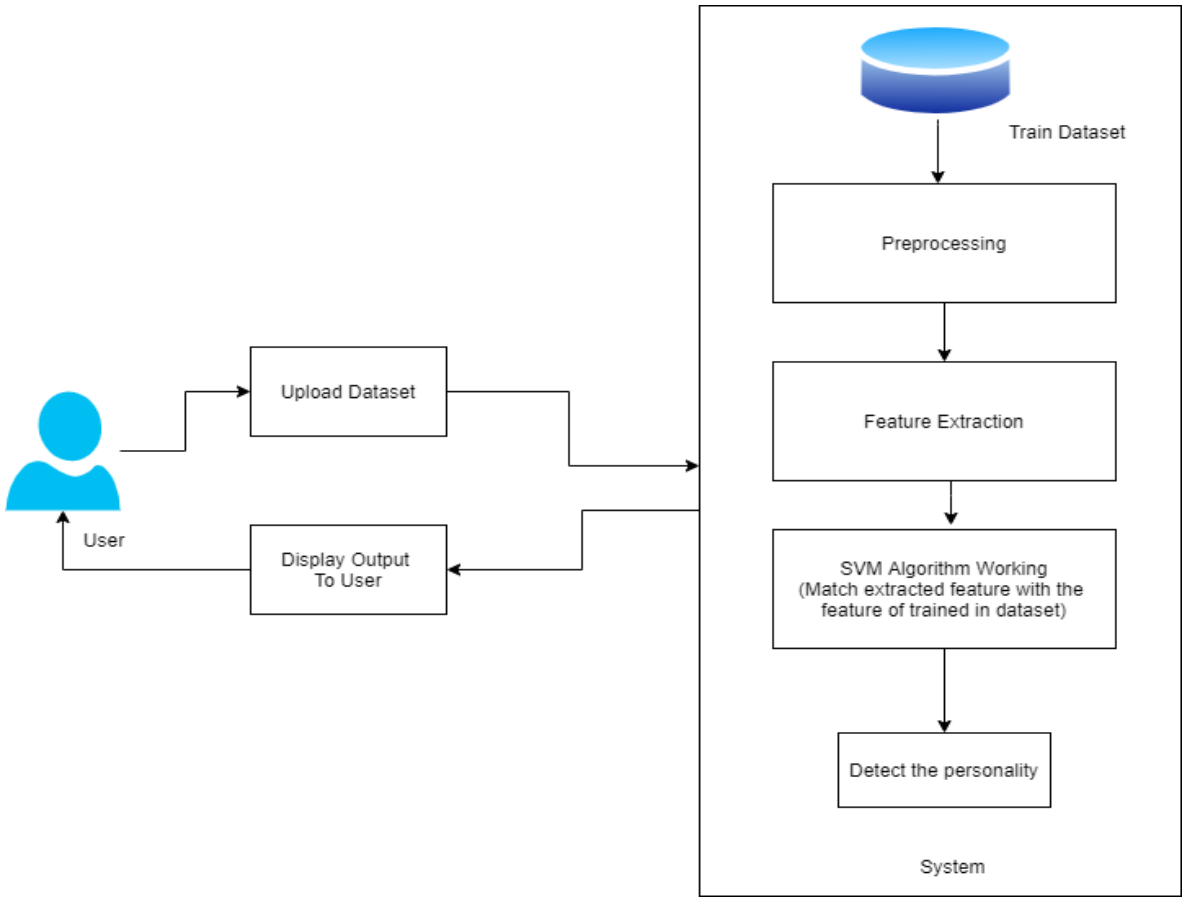

Fig. System Architecture

IV. ALGORITHM

Support Vector Machine, or SVM, is a prominent Supervised Learning technique that is used for both classification and regression issues. However, it is mostly utilized in Machine Learning for Classification difficulties. The SVM algorithm's purpose is to find the optimum line or decision boundary for categorizing n-dimensional space so that we may simply place fresh data points in the proper category in the future. A hyperplane is the optimal choice boundary. SVM selects the extreme points/vectors that aid in the creation of the hyperplane. These extreme examples are referred to as support vectors, and the technique is known as the Support Vector Machine. Consider the diagram below, which shows two distinct categories that are separated by a decision boundary or hyperplane.

V. CONCLUSION

As we all know, the foundation of social media is essentially a graph. The SN characteristics might indicate the connections between the nodes and the influence on them as a result of social media activities. We devised and carried out tests that made use of both linguistic and SN aspects. To the best of our knowledge, we employed the most characteristics to compare the efficacy of feature selection algorithms in predicting personality traits.

REFFERENCES

[1] M. R. Barrick and M. K. Mount, "The big five personality dimensions and job performance: A meta-analysis," Personnel Psychology, vol. 44, no. 1, pp. 1–26, 1991. [Online]. Available: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1744- 6570.1991.tb00688.x

[2] S. Rothmann and E. P. Coetzer, "The big five personality dimensions and job performance," SA Journal of Industrial Psychology, vol. 29, no. 1, pp. 68–74, 2003. [Online]. Available: https://journals.co.za/content/psyc/29/1/EJC88938

[3] J. F. Salgado, "The big five personality dimensions and counterproductive behaviors," International Journal of Selection and Assessment, vol. 10, no. 1, pp. 117–125, 2002. [Online]. Available: https://onlinelibrary.wiley.com/doi/abs/10.1111/1468- 2389.00198

[4] J. W. Lounsbury, R. P. Steel, L. W. Gibson, and A. W. Drost, "Personality traits and career satisfaction of human resource professionals," Human Resource Development International, vol. 11, no. 4, pp. 351–366, 2008. [Online]. Available: https://doi.org/10.1080/13678860802261215

[5] J. W. Lounsbury, N. Foster, H. Patel, P. Carmody, L. W. Gibson, and D. R. Stairs, "An investigation of the personality traits of scientists versus nonscientists and their relationship with career satisfaction," RD Management, vol. 42, no. 1, pp. 47–59, 2012. [Online]. Available: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467- 9310.2011.00665.x

[6] V. Ariyabuddhiphongs and S. Marican, "Big five personality traits and turnover intention among thai hotel employees," International Journal of Hospitality Tourism Administration, vol. 16, no. 4, pp. 355–374, 2015. [Online]. Available: https://doi.org/10.1080/15256480.2015.1090257