



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## AFFINITY FINDER FOR MATRIMONIAL SITE USING AI

<sup>1</sup>Paras Patil, <sup>2</sup>Prof. Pramod Patil, <sup>3</sup>Swapnil Patil, <sup>4</sup>Nikhil Shinde, <sup>5</sup>Purab Kharchane

<sup>1,3,4,5</sup>Student, <sup>2</sup>Professor, <sup>1,2,3,4,5</sup>Computer Engineering,

<sup>1,2,3,4,5</sup>Sandip Institute of Technology and Research Centre, Nashik, Maharashtra, India

*Abstract: Matrimonial Websites are a variation of the standard dating websites. Matrimonial sites are popular in India and it is an alternative to the Traditional Marriage Broker. Matrimonial Services is an application which will provide all Marriage related services and collect all the service providers from all over the India at one platform to help parents looking for marriage to their sons and daughters anywhere in the India. Matrimonial website has similar functionalities like Jeevansathi.com, Bharat matrimony, Shadi.com. It allows user to register his/her profile and search his or her matching profile and supports quick and advance profile search. This system will focus not only in qualification and experience but also focuses on other important aspects which are required for Bride/Groom profile search. This system will help the Bride/Groom to select right Partner. This online matrimonial site is mainly developed to let individual find their potential matches for marriage according to their priorities set. Candidate here will register him/herself with all its details. The Affinity Finder for Matrimonial Site Using AI System is designed for users to find out their best matching pair. This site includes modules such as Candidate/user side. Artificial intelligence (AI) algorithm is helping the users on matrimony sites to find a match not only based on their preferences but also by observing and understanding user's behavior and suggesting real-time appropriate profiles. Definitely AI help to match better. The diversity and the numerous factors that come to play during matchmaking ranging from personal interests, education, language, career, family, lifestyle to horoscopes is what makes it interesting for AI to understand behavior, history and more to match. This project is helpful where we have data related to personal behavior. This personal behavior data can be useful for identifying person based on his/her personality traits. The personality characteristics will be already stored in database. Later when user enters his personality characteristics his personality is examined in database and system will detect the personality of user, it is based on Big Five Personality Traits Personality is one feature that determines how people interact with the outside world. This data can be helpful to classify persons using Automated personality classification (APC). This learning can now be used to classify/predict user personality based on past classifications. Artificial intelligence (AI) algorithm is helping the users on matrimony sites to find a match not only based on their preferences but also by observing and understanding user's behavior and suggesting real-time appropriate profiles. The Ocean Model is used to find behavior matching. For Behavior Classification Used Naive Bayes and Decision Trees.*

**Index Terms - Personality, User's Behavior Matching, AI (Artificial Intelligence), Naive Bayes, Decision Tree, Big Five personality Traits.**

### I. INTRODUCTION

a) Matrimonial Services is a application so you can provide all marriage related services and gather all the service businesses from anywhere withinside the India at one platform to help mother and father seeking out marriage to their little kids anywhere withinside the India. This Matrimonial Application is a Web application that allows the clients to find out partners thru manner of way of Match Behaviors. Using this application, the clients, candidates can check in themselves and search for one-of-a-kind service businesses. In today's kingdom of affairs, it's a tough mission for every person to get art work properly on time because of the truth every person having lack of time and absence of belongings. It is necessity and need to apply the information technology for matrimonial services. For perfect marriage matching Naive Bayes or Decision Tree Algorithm is used and For Behavior Matching OCEAN Model is used. The Ocean Model is used to find out Behavior matching. The crucial purpose of Matrimonial Web Application is to provide grooms and brides with great in shape making experience thru manner of way of exploring the opportunities and belongings to satisfy right functionality accomplice. Keeping our purpose in mind, we have got were given created a worldwide-renowned in shape making services which will touch the souls of tens of lots and lots of people anywhere withinside the globe. Matrimonial Web Application will allow a brand-new client to check in and after successfully registration client can get electronic mail confirmation, after completing registration clients profile may be visible to unique clients. Existing Matrimonial systems are superior to seek out the in shape amongst Bride/Groom as consistent with their age, faith, Caste and Behavior Matching. These systems in shape the behavior of the Bride/Groom to find out an appropriate in shape. To find out an appropriate in shape and recognize the behavior, we proposed a Matrimonial Web Application which uses Artificial Intelligence to recognize the client's behavior and endorse real-time appropriate profiles. Searching for a life accomplice on matrimony internet web sites has become hi-tech now, as the marriage portals are taking the help of artificial intelligence to find out and propose a life accomplice for their clients. Artificial intelligence (AI) set of regulations is assisting the clients on matrimony internet web sites to find out a in shape now now not only based mostly on their picks but moreover thru manner of way of observing and knowledge client's behavior and suggesting real-time appropriate profiles. Definitely AI help to in shape better. The variety and the numerous factors that come to play in the

course of matchmaking beginning from private interests, education, language, career, family, lifestyle to horoscopes is what makes it interesting for AI to recognize behavior, statistics and extra to in shape. For Behavior Classification Used Naive Bayes and Decision Tree. The Ocean Model is used to find out behavior matching. Our Proposed gadget will provide information about the person of the. Bride/Groom. Based on the OCEAN Model supplied thru manner of way of the client, System will in shape the person dispositions with the information stored in database. System will automatically classify the client's person and will in shape the pattern with the stored information. System will take a look at the information stored in database and will in shape the person dispositions of the client with the information in database. Then gadget will stumble on the person of the client. Based on the person dispositions of the client, gadget will provide unique features that are relevant to the client's person. Personality can also have an impact on his/her interaction with the outdoor worldwide and his/her environment.

#### b) Purpose:

This report describes a tool capable of expect the Personality of who person looking for marriage. Matrimonial Web Application is to provide Grooms and Brides with notable matchmaking revel in with the resource of the usage of exploring the opportunities and belongings to fulfil actual cappotential associates. The matrimonial net web web page will provide a platform to several Bride/Groom for finding a great match. There are one-of-a-type sectors like Registration, Partner seeks, etc. So, the Bride/Groom can get their interest for finding their accomplice. Bride/Groom can immediately be searching for an accomplice consistent with their required criteria. It enables the character with the resource of the usage of providing profiles of perspective "Bride" or "Groom" and exceptional records regarding them online. Matrimonial net software provides facility to extrude choice about accomplice. This software provides facilities like edit profile, update the picture and delete a picture, cover profile, create album, deliver unique interest, deliver personal message to the character. This software moreover provides matchmaking beginning from personal interests, education, language, career, family, manner of existence to horoscopes is what makes it exciting for AI to recognize behaviour, history.

#### c) Document Convention:

The main objective of Matrimonial Web Application is to provide grooms and brides with excellent match making experience by exploring the opportunities and resources to meet true potential partner. Keeping our objective in mind, we have created a world-renowned match making services that will touch the souls of millions of people all over the globe. To conduct personality test.

DB-Database  
API: Application programmable Interface  
UI User interface  
UX User experience

#### d) Intended Audience and Reading Suggestions:

This document is useful for any individual looking for marriage. Affinity Finder for Matrimonial Site using AI and also to evaluate the personality type of the person. The personality of the human plays a major role in his personal and professional life. Now a days many organizations started short listing the candidate based upon their personality as this increases the efficiency of work because the person is working in what he is good and at what he is forced to do.

## II. LITERATURE REVIEW

SR No.	Paper Name	Author Name	Description
1	Toward Predicting Active Participants in Tweet Streams: A case study on Two Civil Rights Events.	Xiao Kun Wu et al.	In 2020, Xiao Kun Wu et al. assessed character via Twitter tweets of social media customers the usage of a weighted Random Forest (weighted-RF) classifier. They used datasets approximately civil rights activities and as compared weighted-RF with seven one of a kind gadget mastering algorithms in addition to claimed that weighted Random Forest achieved the satisfactory amongst all of the different classifiers.
2	Machine intelligence-based personality prediction using social profile data.	Rohit GV et al.	Rohit GV et al. expect persona the usage of Facebook fame that may be shared through customers on their profiles. They used the BIG5 version and Random Forest Classifier for his or her studies and finished 64.25% accuracy or 5.25 imply rectangular blunders turned into finished through the usage of a random wooded area regressor.

3	Using textual records for persona prediction: a machine studying approach.	Aditi V. Kunte et al.	In 2019, Aditi V. Kunte et al. used a real-time Twitter dataset for the persona prediction task. They used 3 exceptional device gaining knowledge of algorithms (Linear Discriminate Analysis, Adaboost, and Multinomial Naive Bayes). After comparing those 3 algorithms they concluded that Multinomial Naive Bayes were given the best accuracy this is 73.43%.
4	Twit personality: Computing character trends from tweets the use of phrase embeddings and supervised learning.	Giulio Carducci et al.	In 2018, Giulio Carducci et al. showcased a supervised mastery technique for becoming aware of character tendencies via an individual's tweets. They used my Personality and Twitter datasets for his paintings and the incorporation of phrases used as a vectorizer. SVM (Support Vector Machine), Linear Regression and Lasso modes are used and conclude that linear regression plays the worst.
5	Instagram Addiction and the Big Five of Personality: The Mediating Role of Egoism.	K. Kircaburun and M. D. Griffiths	K. Kkraburun and Mdgriffths explored the associations between personality, daily use of the Internet, self-week and Instagram dependence. They concluded that daily internet use was negatively correlated with Instagram addiction - selfishness, awareness, and pleasantness are three factors negatively correlated with Instagram addiction.
6	A survey on human persona identity on the idea of handwriting the use of ANN.	Varshney et al.	In 2017, Varshney et al. recognized human personality via analyzing their handwriting. For the analysis of the handwriting-based system, they used the following terms: margin, spacing, connections, slant, letter size, speed, clarity, pressure, zones, a large middle zone, small middle zone, and upper zone extension.
7	Introduction to <b>device</b> prediction of <b>persona</b> from Facebook profiles.	Gupta et al.	Gupta et al. contribute to the personality prediction task. For their research, they collected Facebook profile data like user's name, date of birth, gender, age, qualification, marital status as well as Facebook activities like dislike, and posts to predict personality traits. The activities performed by every individual is essential because it reveals valuable insight to predict the user's concern, behavior, nature, and sentiments. They used the k nearest neighbor algorithm to train their dataset.
8	Personality evaluation the use of Twitter tweets.	Ahmad et al.	Ahmad et al. expect the character tendencies of a Twitter user the usage of the DISC model. They pulled approximately 1,000,000 latest tweets from Twitter and divided their method into 3 important degrees that are information mining, evaluation and visualization. They extracted the information the usage of RapidMiner that is one of the nice systems studying gear and gives numerous phrase processing packages. After extraction, evaluation and visualization, they expect the character tendencies of users.

9	The effect of big 5 persona trends on salespeople's performance: Exploring the moderating position of culture.	Yakasai et al.	In 2015 Yakasai et al. examine the impact of FFM attributes at the overall performance of salespersons. There are 3 principal targets of their studies initially they examine the relationship amongst the attributes of FFM, shop clerk overall performance, and shop clerk patron orientation. Secondly, they explored the effect of lifestyle at the proposed version, and finally, they proposed a version at the overall performance of a shop clerk in addition to encompass the effect of client orientation and lifestyle on income overall performance.
10	A look at on effect of massive 5 persona trends on emotional intelligence.	Dehghanan et al.	In 2014, Dehghanan et al. examine the impacts of the Five-Factor model attributes on emotional intelligence. For this, they worked on a few Iranian organizations and used two questionnaires "McCrae and Costa questionnaire (NEO-PI R)" to measure the personality attributes and "Bradbury and Grieve questionnaire" to measure the impacts of emotional intelligence. They considered the five hypotheses by using regression and structural equation modeling and concluded that Openness, Conscientiousness, Extraversion, and Agreeableness affects positively on emotional intelligence whereas Neuroticism affects negatively.
11	Personality developments popularity on social community Facebook.	Alam et al.	In 2013, Alam et al. contribute to the field of personality prediction and compare the performance of different classification methods also concluded that MNB (Multinomial Naive Bayes) performs better as compare to SMO (Sequential minimal optimization) and BLR (Bayesian Logistic Regression)
12	Predicting personality from twitter.	Golbeck et al.	In 2011, Golbeck et al. collected 2000 recent tweets of users and perform text analysis. They choose the BIG 5 model and analyze tweets text through two methods LIWC (Linguistic Inquiry and Word Count) and MRC psycholinguistic database. When the features are obtained, they apply two different machine learning algorithms for personality prediction (Zero and Gaussian process)

### III. PROBLEM STATEMENT

To broaden a software to Affinity Finder for Matrimonial Site Using AI. Existing matrimonial structures are advanced to hunt down the healthy the conduct of the bride/groom to discover the proper healthy. To discover the proper healthy and apprehend the conduct we proposed a Matrimonial Web Application that makes use of Artificial Intelligence to apprehend the user's conduct and endorse real-time suitable profiles.

### IV. OBJECTIVE

- The objectives are as follows:
  - The main objective of the wedding web application is to provide the bride and groom with a great dating experience by exploring the opportunities and resources to meet the real potential partner. With our goal in mind, we've created a world-class matchmaking service company that will touch the souls of millions of people across the globe.
  - Take a personality test.

## V. METHODOLOGY

### 1) Decision Tree:

Decision tree gaining knowledge of is one of the predictive modelling methods that use a selection tree (as a predictive model) to head from observations approximately an object i.e., attribute (represented withinside the branches) to conclusions approximately the object's goal price i.e., churn or not (represented withinside the leaves). Tree fashions wherein the goal variable can take a discrete set of values are known as category bushes; in those tree structures, leaves constitute magnificence labels and branches constitute conjunctions of functions that result in the one's magnificence labels. Decision bushes wherein the goal variable can take non-stop values (usually actual numbers) are known as regression bushes. This set of rules splits a records pattern into or greater homogeneous units primarily based totally on the maximum substantial differentiator in entering variables to make a prediction. With every cut-up, part of a tree is being generated. As a result, a tree with selection nodes and leaf nodes (which might be choices or classifications) is developed. A tree begins off evolved from a root node – the high-quality predictor. Decision Trees are a kind of Supervised Machine Learning (this is you give an explanation for what the entry is and what the corresponding output is withinside the schooling records) wherein the records are constantly cut up consistent with a positive parameter. The tree may be defined with the aid of using entities, particularly selection nodes and leaves. The leaves are the choices or the very last results. And the selection nodes are wherein the records are cut up. which might be results like either 'fit', or 'unfit'. In this case, this turned into a binary category problem (a yes-no kind problem).

### 2) Naïve Bayes:

Naïve Bayes set of rules is a supervised mastering set of rules, that is primarily based totally on the Bayes theorem and used for fixing type problems. It is specifically utilized in the textual content type that consists of a high-dimensional schooling dataset. Naïve Bayes Classifier is one of the easy and best Classification algorithms that enable in constructing speedy device mastering fashions that may make short predictions. It is a probabilistic classifier, because of this that it predicts on the premise of the opportunity of an object. Some famous examples of the Naïve Bayes Algorithm are unsolicited mail filtration, Sentimental analysis, and classifying articles.

## VI. SYSTEM ARCHITECTURE

The structure of the gadget provides a high-level view of the functioning of the gadget. The functioning of the gadget begins to evolve with the collection of records from the database and here we divide the records into instruction records and check the records, choosing the attributes. And then the preprocessing of the desired records is finished so as to delete the replay records and the error records. First, customers need to sign in and then write to the person. Have or take a look: school records. Here is Ocean Model then classify the type of person. Accuracy is measured using the Record Verification gadget usage check.

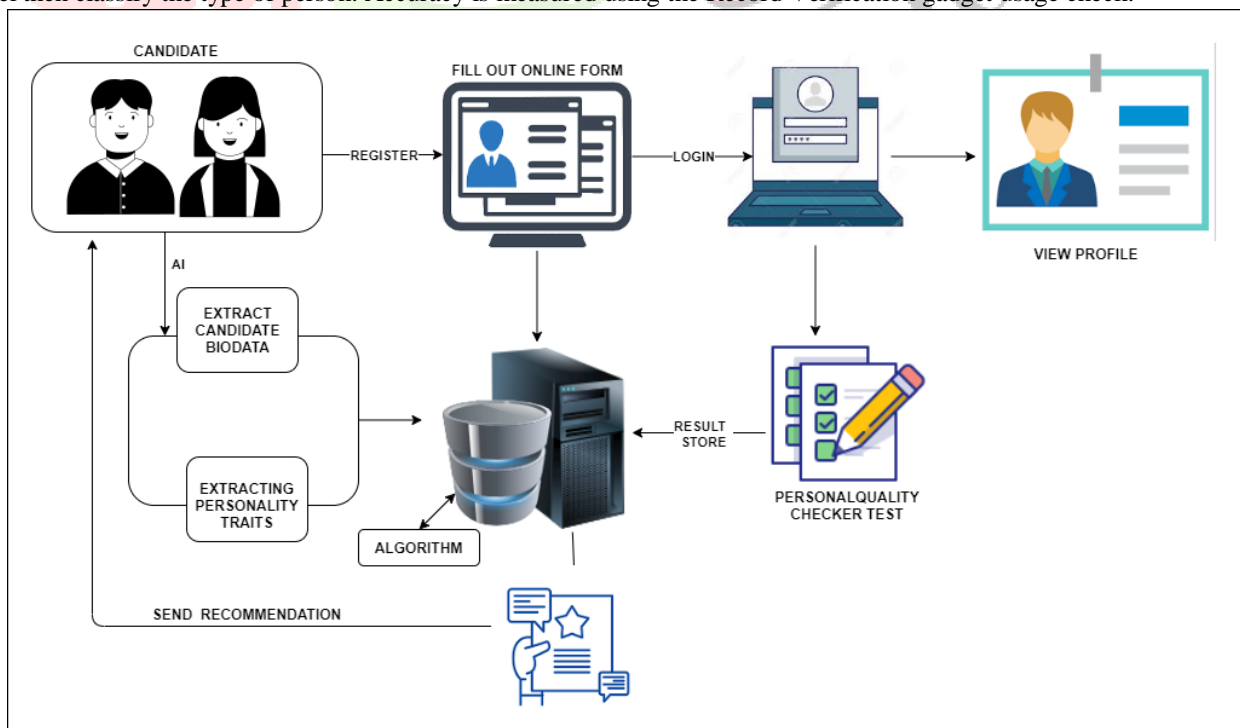


Fig: System Architecture

- EXITING SYSTEM

In the present device, an automated character class device is provided which uses certain fact-mining strategies and device mastery algorithms are used to classify the personalities of various users. And through the use of unique algorithms like the Big Five Personality Model, Logistic Regression, Decision Tree, and Support Vector Machine. By understanding the facts beyond and their styles, it is easy to locate the character through the use of new strategies, so that it goes beyond the current device. In this proposed device, the graph will provide the probabilities of this automated personality system. Here he proposes probabilistic values from zero to 1. An automated personality scoring system is designed in which each candidate / person is given a separate username and password if registered, otherwise the person must register before participating in the survey. Each candidate signs in to the survey / reviews their username and password and accepts the survey. Includes 50 questions of each trait and an inherent skill. Take a look at 10 questions and the person can take the survey to determine Big 5's character traits. After completing the survey, the person can see their character's final score. Then we can see the graph once you have a final result, after which it offers guidelines to those whose font is suitable, for example, as a friend's suggestion.

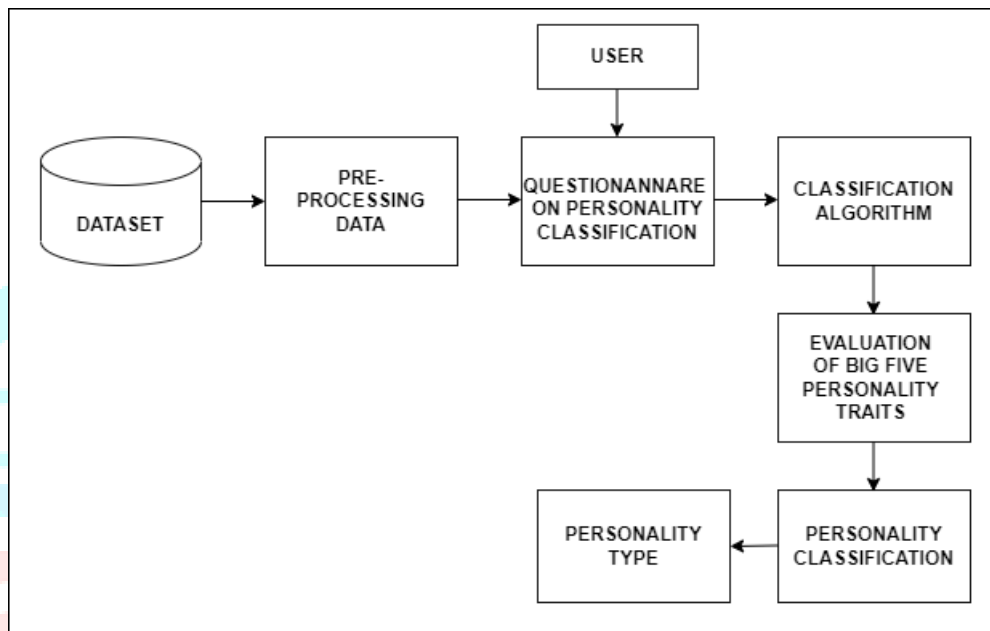


Fig.4 Existing System Architecture

## VII. CONCLUSION

The Marriage Web App provides a fantastic match for the bride and groom with ways to explore possibilities and resources to satisfy the real abilities of partners. The marriage website will provide a platform for a number of spouses to find the ideal couple in separate areas such as registration, partner search, etc. Therefore, newlyweds can find their hobby by finding their partner. The spouses can immediately search for companions who meet the required criteria. It allows the consumer to provide "Bride" or "Married" prospect profiles and other facts about them online. The internet marriage utility offers a chance for additional choices of a partner. This utility offers centers such as improving a profile, updating an image graphic and deleting an image graphic, hiding a profile, expanding the album, sending explicit entertainment, sending non-public messages to the consumer. This utility also offers mapping of non-public interests, education, language, career, family, lifestyle to horoscopes, this is what makes AI exciting to understand the behavior, history.

## VIII. REFERENCE

- [1] Wu, X. K., Zhao, T. F., Chen, W. N., & ZHANG, J. (2020). Toward Predicting Active Participants in Tweet Streams: A case study on Two Civil Rights Events. *IEEE Transactions on Knowledge and Data Engineering*.
- [2] Rohit, G. V., Bharadwaj, K. R., Hemanth, R., Pruthvi, B., & Kumar, M. (2020, August). Machine intelligence-based personality prediction using social profile data. In *2020 Third International Conference on Smart Systems and Inventive Technology (ICSSIT)* (pp. 1003-1008). IEEE.
- [3] Kunte, A. V., & Panicker, S. (2019, November). Using textual data for personality prediction: a machine learning approach. In *2019 4th International Conference on Information Systems and Computer Networks (ISCON)* (pp. 529-533). IEEE.
- [4] Carducci, G., Rizzo, G., Monti, D., Palumbo, E., & Morisio, M. (2018). Twit personality: Computing personality traits from tweets using word embeddings and supervised learning. *Information*, 9(5), 127.
- [5] Kircaburun, K., & Griffiths, M. D. (2018). Instagram addiction and the Big Five of personality: The mediating role of self-liking. *Journal of behavioral addictions*, 7(1), 158-170.
- [6] Varshney, A., & Puri, S. (2017, January). A survey on human personality identification on the basis of handwriting using ANN. In *2017 international conference on inventive systems and control (ICISC)* (pp. 1-6). IEEE.
- [7] Gupta, N., Waykos, R. K., Narayanan, R., & Chaudhari, A. (2017). Introduction to machine prediction of personality from Facebook profiles. *Int. J. Emerg. Technol. Adv. Eng.*, 66-70.
- [8] Ahmad, N., & Siddique, J. (2017). Personality assessment using Twitter tweets. *Procedia computer science*, 112, 1964-1973.
- [9] Yakasai, A. M., & Jan, M. T. (2015). The impact of big five personality traits on salespeople's performance: Exploring the moderating role of culture. *Kuwait Chapter of the Arabian Journal of Business and Management Review*, 4(5), 11
- [10] Dehghanan, H., & Rezaei, M. (2014). A study on effect of big five personality traits on emotional intelligence. *Management Science Letters*, 4(6), 1279-1284.
- [11] Alam, F., Stepanov, E. A., & Riccardi, G. (2013, June). Personality traits recognition on social network facebook. In *Proceedings of the International AAAI Conference on Web and social media (Vol. 7, No. 1)*.
- [12] Golbeck, J., Robles, C., Edmondson, M., & Turner, K. (2011, October). Predicting personality from twitter. In *2011 IEEE third international conference on privacy, security, risk and trust and 2011 IEEE third international conference on social computing* (pp. 149-156). IEEE.
- [13] Pramod Patil, Ankita Kashmire, Pooja Kute, Pradnya Rathor, Anam Shaikh, "Tract Angle using Machine Learning" *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.177, Volume 8 Issue I, Jan 2020.