

The Roomie – Find the Perfect Room Partner using ML algorithm

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Abstract : *Project is to make a flat mate locator web application so understudy can track down flat mate according to there persuade and character. Individuals by and large view as challenging to track down a flat mate who is viable and similar to oneself. Like frequently flat mate issues emerge from disagreements about neatness in like manner regions. A large portion of the understudy have issue to track down better flat mate. Because of current monetary reasons numerous youngsters live with flat mates additionally many individuals live by paying rent however they are not happy with that spot. We felt that there must be a simple, free way for everybody to track down the ideal flat mate, or even better, their absolute closest companion. So we chose to fabricate a web application which have highlights like observing flat mates coordinating with one's character. To achieve this, we will utilize strategy called 'Enormous Five Personality Test' and some Machine Learning calculations.*

Keywords: *Python, Machine Learning, Personality-system, Front End, Roommate, Potential Match.*

1.INTRODUCTION:

Character is a way individual answer what is happening. Mix of attributes make a singular remarkable. Appraisal of character throughout the course of recent a very long time in different investigates has uncovered that character can be characterized by five aspects known as Big Five character characteristics. In this task we are foreseeing character of the individual and assuming that the character is coordinating with another individual, then, at that point, showing the profile of that individual and reaching that individual. In this we are utilizing some Machine Learning. calculations, Backend and Frontend innovation with Python

programming language. In Machine Learning we are utilizing calculated relapse and KNN calculation. In Backend innovation we are utilizing Django and SQL data set to store the outcome. To achieve this, we are utilizing strategy called 'Huge Five Personality Test'. In which we are posing a few inquiries to the client and utilizing that question anticipating character of that individual and showing matching profile of that individual.

2.MOTIVATION:

We see many individuals are coming in city and tracking down the room yet individuals confronting the many issues to observe wonderful room accomplice. Utilizing ML calculations, we can match the attributes of the people and showing the matching profile to the individual.

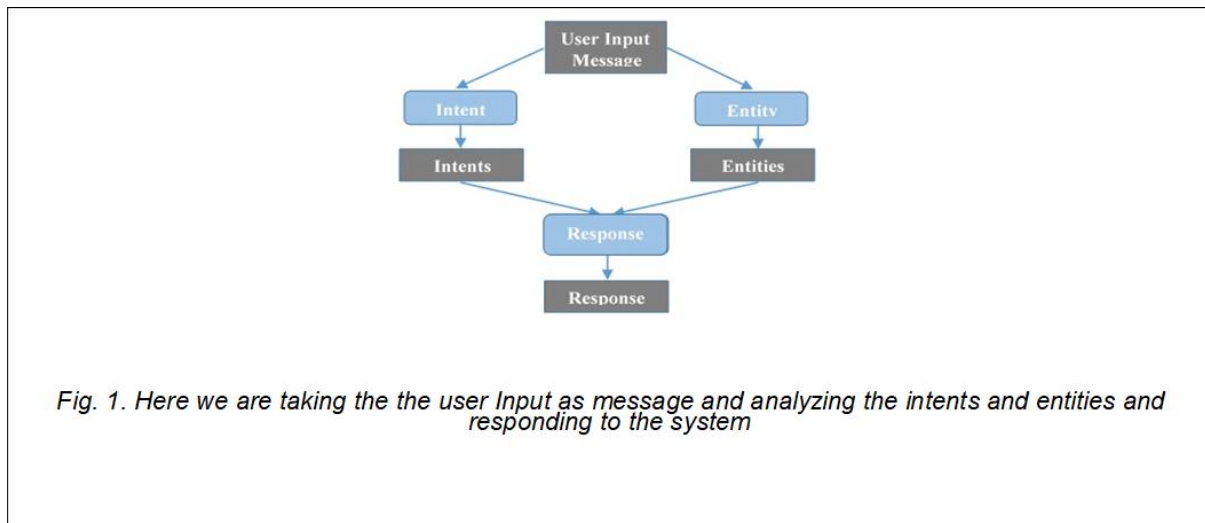
3.PROBLEM STATEMENT:

We see many individuals or understudies ventures out from home for studies and they track down trouble to track down ideal rooms in the city region and, surprisingly, subsequent to observing room they battle with coexisting with their flat mates.

4.PROBLEM DEFINATION:

Individuals by and large view as hard to track down a flat mate who is viable and similar to oneself. Like frequently flat mate issues emerge from disagreements regarding tidiness in like manner regions. A large portion of the understudy have issue to track down better flat mate. Because of current financial reasons numerous youngsters live with flat mates additionally many individuals live by paying rent yet they are not happy with that spot. project is to make a flat mate locator web application with the goal that understudy can track down flat mate according to there persuade and character.

5.EXISTING SYSTEM:



6.SYSTEM ARCHITECTURE

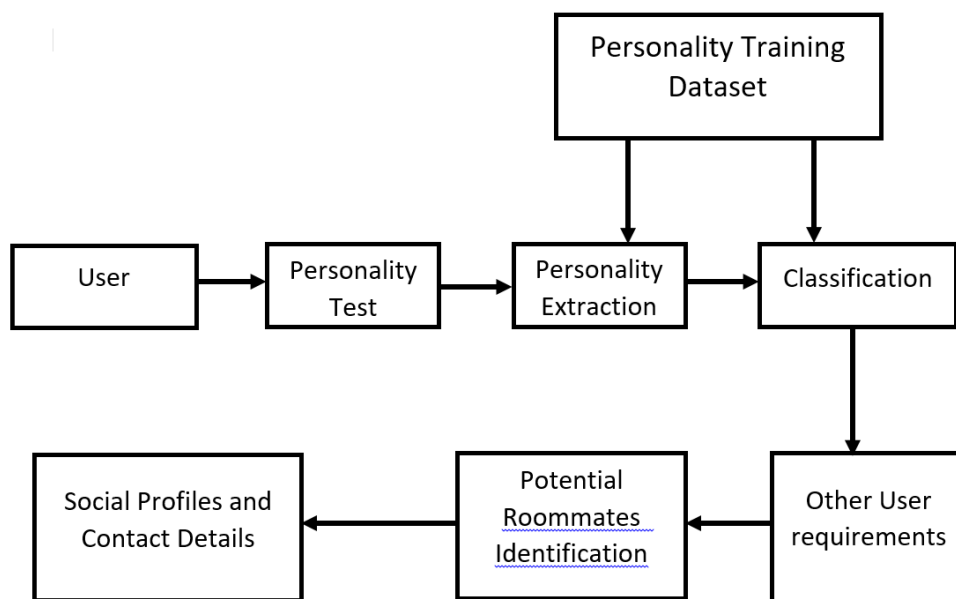


Fig. 2 System Architecture

7.PROPOSED SYSTEM

a)METHODOLOGY:

To begin with, client should enroll themselves on the application. Clients need to enlist by giving their mail is and secret phrase. Then client can login by their resister username and

secret word. Then, at that point, they need to fill their essential data like their orientation, date of birth, name family name. Additionally need to choose that client is understudy proficient and furthermore need to compose their profile. A while later client need to fill their lodging inclinations in that client need to choose or pick the area he/she need to remain. Then, at that point, client need to give their most extreme and least financial plan. By giving that client can track down the room as per their financial plan. In these inclinations client additionally can set that they need private or familiar room. Then next is Lifestyle inclinations client need to first and foremost select food type like veg or non-veg. Then where client is smoking or not or on their desired event to choose then client is doing liquor or not. On the off chance that the client is pet cordial, they can likewise fill that data, how client need cook sheared or single this can likewise choose. They can give their reach for neatness, dinner, guest, sleep time, wakeup time. After all the data is gathered from the client, then client get many profiles with comparable orientation. In that client can choose with whom client need to remain. Then client need to set many channels like their language, conjugal status, light ought to be off or on while resting, age, side interests. On the off chance that the client enjoys their leisure activities, client can write in that choice. In the wake of filling all the data about their lodging inclinations way of life inclinations and setting channels concurring that data client is viable are shown. In the wake of giving data then client could many profiles when client at any point get their match then client can send inquiry to their match or whom client need to remain. In that client can converse with their match. Client can speak more about we and furthermore give more data about ourselves. Assuming that the client coordinate like clients' data or coordinate is OK with the client, then client can remain with match or accomplice. There is another page that is fail to remember secret key in that page on the off chance that client fail to remember their register secret phrase, client can set another secret key. In that client need to give their register username then click on reset secret key in that client can give their new secret key.

b)ALGORITHM:

- K-Nearest Neighbor is one of the least complex Machine Learning algorithms in light of Supervised Learning method.
- K-NN algorithm expects the likeness between the new case/information and accessible cases and put the new case into the class that is generally like the accessible classifications.
- K-NN algorithm stores every one of the accessible information and characterizes another information point in light of the likeness. This implies when new information shows up then it tends to be effectively grouped into a well suite classification by utilizing K-NN algorithm.

- K-NN algorithm can be utilized for Regression as well concerning Classification yet for the most part it is utilized for the Classification issues.
- K-NN is a non-parametric algorithm, and that implies it makes no presumption on hidden information.
- It is additionally called a lazy learner algorithm since it doesn't gain from the preparation set quickly rather it stores the dataset and at the hour of arrangement, it plays out an activity on the dataset.
- KNN algorithm at the preparation stage simply stores the dataset and when it gets new information, then, at that point, it characterizes that information into a class that is similar as the new information.

Suppose, we have an image of a creature that looks similar to cat and dog, but we want to know either it is a cat or dog. So, for this identification, we can use the KNN algorithm, as it works on a similarity measure. Our KNN model will find the similar features of the new data set to the cats and dogs images and based on the most similar features it will put it in either cat or dog category.



Fig. 3 KNN

8.ADVANTAGES,LIMITATIONS & APPLICATIONS:

a)ADVANTAGES :

1. Logistic relapse is simpler to carry out, decipher, and exceptionally effective to prepare.
2. It can decipher model coefficients as marks of element significance.
3. KNN algorithm has speedy computation time, straightforward algorithm, flexible, high exactness.

b)LIMITATIONS:

1. If the quantity of perception is lesser than the quantity of elements, Logistic relapse ought not be utilized.
2. In KNN algorithm precision relies on nature of the information. Require high memory - need to store all of the preparation information.

c)APPLICATION:

1. To observe flat mate matches to our character.
2. Saves the time.
3. Automated Friend idea.

9.FUTURE SCOPE:

This is an android application which works with flat mate search in light of client interests. Individuals for the most part find it challenging to track down a flat mate who is viable and similar to oneself.

This undertaking will help understudies/experts in building their profiles and afterward looking through flat mates in light of different channels. It additionally permits you to see the profile of various clients in light of your pursuit rules.

Ideal interest group: The main interest group is any individual who needs to track down a flat mate.

10. CONCLUSION:

This undertaking is very helpful for tracking down flat mate or empty loft around college grounds. It is not difficult to get to and its highlights can assist with looking favored matches. The application gives convenient highlights of area based assistance like autocomplete of address, seeing all matches on guide and route to recorded loft from current area utilizing Google Maps API. This application can be utilized by wide scope of individuals as need might arise for two kinds of clients. In addition, it gives different kind of correspondence to interface with two clients like application to application messages, instant message to other client's telephone, and direct email to other client. It is based on Service Oriented Architecture, so all the business rationale and information access are relocated to web administration from android gadget, so it is very light weighted. This application can be utilized in all the Android upheld gadgets (tablets, cell phones).

ACKNOWLEDGEMENT :

It is indeed a great pleasure and moment of immense satisfaction for we to present a project report “The Roomie – Find the Perfect Room Partner Using ML Algorithm’s.” amongst a wide panorama that provided us inspiring guidance and encouragement, we take the opportunity to thanks those who gave us their indebted assistance. We wish extend our cordial gratitude with profound thanks to our internal guide Prof. Gayathri Bhandari. for her everlasting guidance. It was her inspiration and encouragement which helped us in completing our project. Our sincere thanks and deep gratitude to Head of Department, Prof. Gayathri Bhandari and other faculty members, but also to all those individuals involved both directly and indirectly for their help in all aspects of the project. Atlast not least we express our sincere thanks to our Institute’s Principal Dr. T. K. Nagaraj, for providing us infrastructure and technical environment.

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