# The Roomie – Find the Perfect Room Partner using ML Algorithm

**Sayali Ambekar, Aniket Bagal, Pratik Dokhe, Vishakha Wavhale, Dr.Gayatri Bhandari**

Student, Dept. of Computer Engineering, JSPM's Bhivarabai Sawant Institute of Technology & Research, Pune,

Maharashtra, India

Head of Dept., Dept. of Electrical Engineering, JSPM's Bhivarabai Sawant Institute of Technology & Research, Pune,

Maharashtra, India

**ABSTRACT:**Project is to make a room mate finder web application so student can followdown level mate as per there convince and character. People all around view astesting to find a level mate who is reasonable and like oneself. Like regularly levelmate issues rise up out of conflicts about tidiness similarly locales. An enormouspiece of the student have issue to find better level mate. Due to currentfinancial reasons various youths live with level mates moreover numerous peoplelive by paying rent anyway they are not content with that spot. We felt that there should be astraightforward, free way for everyone to find the best level mate, or surprisingly better, theiroutright dearest friend. So we decided to create a web application which havefeatures like noticing level mates organizing with one's personality. To accomplish this, we willuse methodology called 'Big Five Personality Test' and some Machine Learningestimations.

**KEYWORDS:** Python, Machine Learning, Roommate, Potential Match.

## I. INTRODUCTION

Character is a way individual response what's going on. Blend of traits make a solitarymomentous. Evaluation of character all through ongoing seemingly forever indifferent explores has uncovered that character can be portrayed by five perspectivesknown as Big Five person attributes. In this assignment we are predicting character of theindividual and accepting that the person is organizing with another individual, then, at that point, atthat point, showing the profile of that individual and contacting that person. In this we areusing some Machine Learning. computations, Backend and Frontend advancement with Python programming language. In Machine Learning we are using determined backslide and KNNestimation. In Backend advancement we are using Django and SQL informational collection to store theresult. To accomplish this, we are using technique called 'Enormous Five Personality Test'. Inwhich we are representing a couple of requests to the client and using that question expectingcharacter of that individual and showing matching profile of that individual.

## II. RELATED WORK

Plan a portable item experience that makes it protected to track down an optimal roommate in another city. Plan the experience according to the point of view of a looking individual for a roommate as well as the person who is searching for a loft. In the wake of tracking down the best roommate, how else might this item make the roommate experience better?Observing a roommate in another city can be a ton of work. Fortunately, you don't need to stress over it. Find your home through calving with Common, as it works on the pressure of moving by assisting you with avoiding the roommate search. We offer roomy private bedrooms in flawless, completely outfitted, shared lofts. Keyless passage and prepared to live in spaces implies your whole move-in interaction can take under 60 minutes. Our parlors are mindfully intended for solace, and the kitchens are supplied with every one of the fundamental apparatuses and dishware. Clothing is strategically placed nearby, as need might arise to make it happen — no quarters vital.Every roommate has a singular rent, and every one of the utilities, even fast Wifi, are remembered for your regularly scheduled installments. We stop roomie quarrels from really developing by offering let loose week by week cleanings and loading you with basics like tissue, paper towels, and cleanser, so there will never be an inquiry concerning who's turn it is to go to the store. Apartment complexes generally offer normal spaces, so you can have get-togethers in any

event, when you're roomie isn't feeling social.

## III. METHODOLOGY

The Regardless, client ought to enlist themselves on the application. Clients need to enroll bygiving their mail is and secret expression. Then, at that point, client can login by their secret word. Then, they need to fill their fundamental information like there direction,date of birth, name family name. Moreover need to pick that client is studentcapable and moreover need to create their profile. Some time later client need to fill theredwelling tendencies in that client need to pick o pick the region he/she really want to remain.Then, client need to give their most limit and least monetary arrangement. By givingthat client can find the room according to their monetary arrangement. In these tendencies clientmoreover can set that they need private or natural room. Then, at that point, next is Lifestyle tendenciesclient need to as a matter of first importance select food type like veg or non-veg. Then where client issmoking or not or on their ideal occasion to pick then client is doing alcohol or not. On theremote possibility that the client is pet warm, they can moreover fill that information, how client need cooksheared or single this can in like manner pick. They can give their range for tidiness, clamor,visitor, rest time, wakeup time. After every one of the information is assembled from the client, then client getmany profiles with practically identical direction. In that client can pick with whom client need toremain. Then, at that point, client need to set many channels like their language, intimate status, lightshould off or on while resting, age, side interests. If the client appreciatestheir recreation exercises, client can write in that decision. Following filling every one of the information abouttheir housing tendencies lifestyle tendencies and setting channels agreeing that informationclient is reasonable are shown. Directly following giving information then client could many profiles whenclient anytime get their match then client can send request to their match or whom clientneed to remain. In that client can chat with their match. Client can talk more about wealso, besides give more information about ourselves. Expecting that the client coordinate likeclients' information or direction is OK with the client, then, at that point, client can stay with match orassistant. There is another page that is neglect to recollect secret key in that page on the offchance that client neglect to recall their register secret expression, client can set another mysterykey. In that client need to give there register username then click on reset secret key in thatclient can give their new mystery key.

## IV. PROPOSED MODEL

ALGORITHM:

K-Nearest Neighbour is one of the most un-complex Machine Learning algorithms consideringDirected Learning strategy.K-NN algorithm anticipates the resemblance between the new case/data and opencases and placed the new case into the class that is by and large like the available characterizations.K-NN algorithm stores all of the open data and describes anotherdata point considering the similarity. This suggests when new data appears then itwill in general be actually gathered into a well suite grouping by using K-NN algorithm.K-NN algorithm can be used for Regression too concerning Classification yet for themost part it is used for the Classification issues.K-NN is a non-parametric algorithm, and that infers it makes no assumption on stowed awaydata.It is moreover called a lethargic student algorithm since it doesn't acquire from the planning setrapidly rather it stores the dataset and at the hour of game plan, it plays out an action onthe dataset.KNN algorithm at the arrangement stage essentially stores the dataset and when it gets newdata, then, it describes that data into a class that is comparative asthe new data.

## V. RESULTS

This undertaking is incredibly helpful for tracking down roommate or empty condo around college grounds. It is not difficult to get to, and its highlights can assist with looking favored matches. The application gives helpful elements 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 the need might arise for two kinds of clients. Additionally, it gives different sort of correspondence to interface with two clients like application to application messages, instant message to other client's telephone, and direct email to another 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).
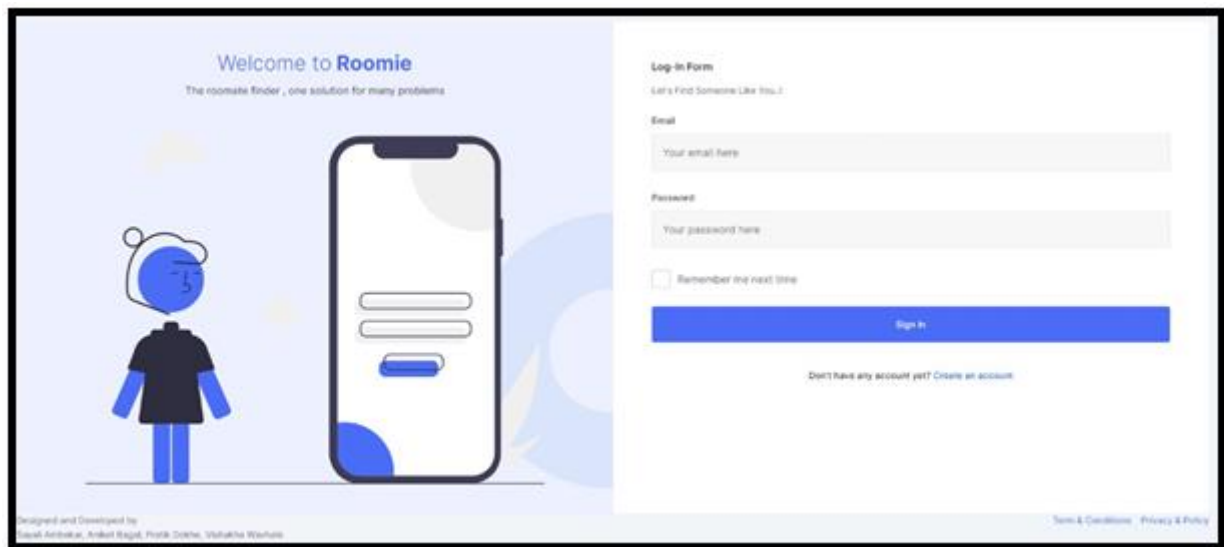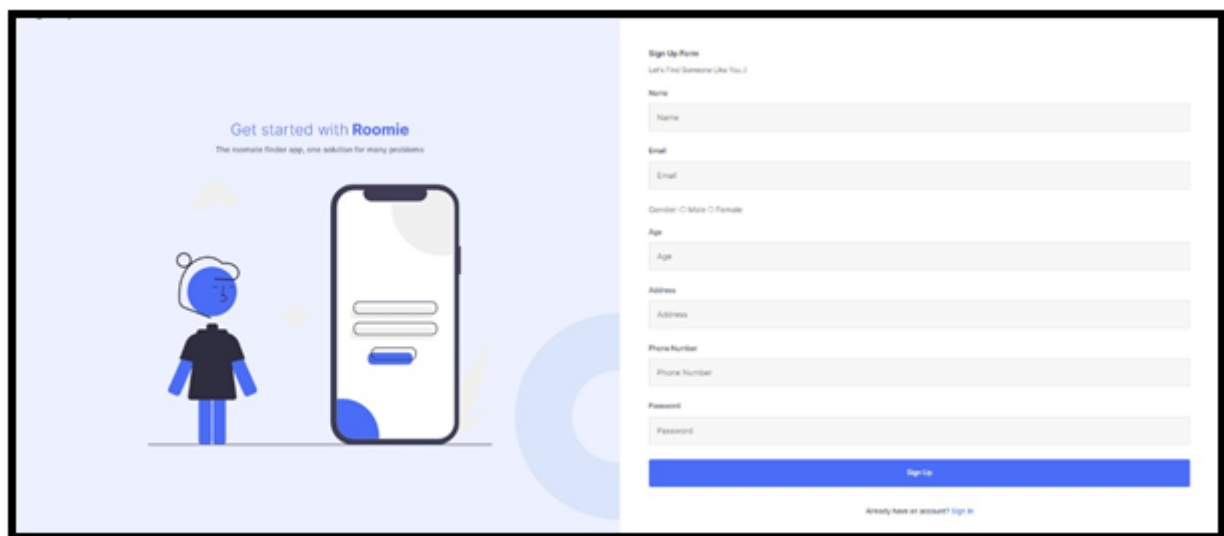
Fig. 1 Log in page



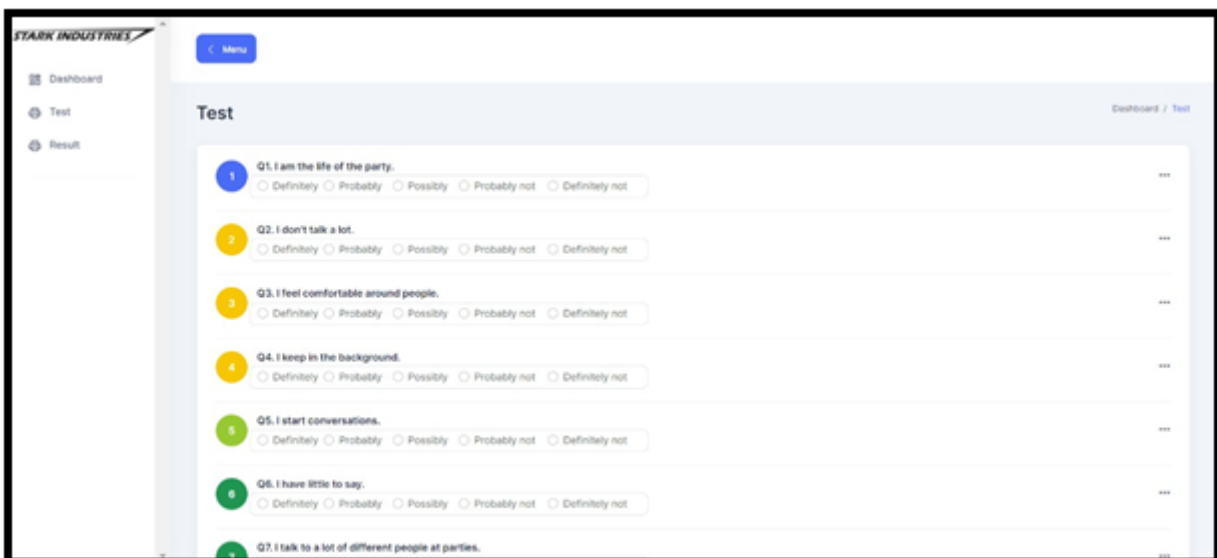Fig. 2 Sign Up Page

Fig. 3. Dashboard
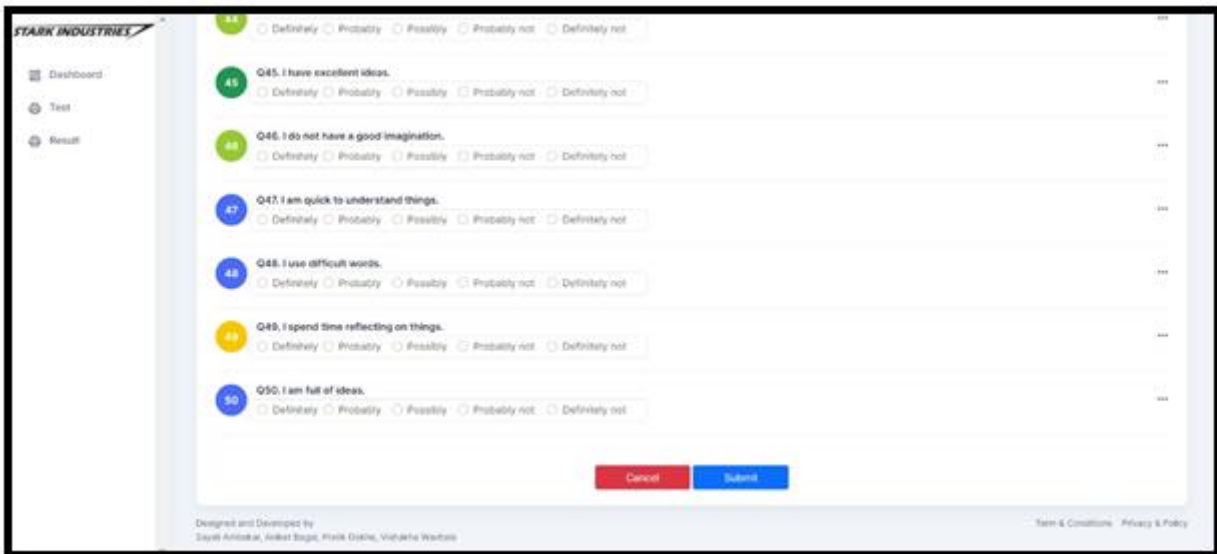


Fig. 4. Personality test
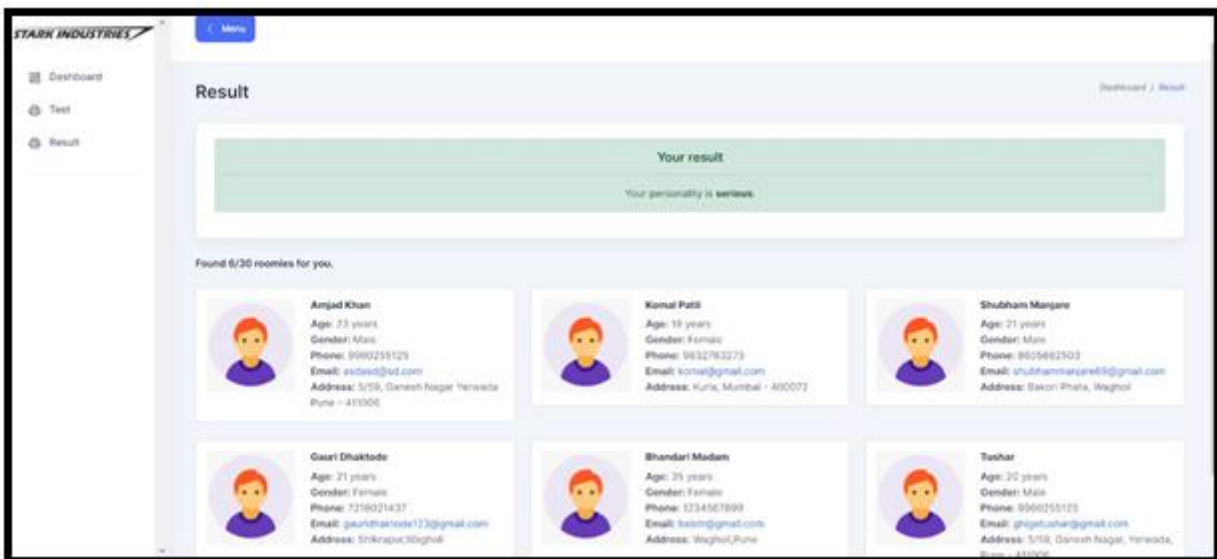
Fig. 5Question Submit Button



Fig. 6 Result

## VI. CONCLUSIONS

This endeavor is extremely useful for finding level mate or void space around schoolgrounds. It is easy to get to and its features can help with looking inclined toward matches.The application gives advantageous features of region based help like autocomplete ofaddress, seeing all matches on guide and course to recorded space from current region usingGoogle Maps API. This application can be used by wide extent of people as needcould emerge for two sorts of clients. Also, it gives different sort of correspondence tointeract with two clients like application to application messages, text to otherclient's phone, and direct email to other client. It depends on Service OrientedDesign, so all the business reasoning and data access are moved to weborganization from android device, so it is extremely light weighted. In these application client need to send there message/inquiry throughmail. They can't straightforwardly message on the versatile number. Our human requirement for continuouscorrespondence has authoritatively advanced from SMS texts with our companions to pretty much anyonline connection with anybody. That is the reason we're

seeing an ascent of visit highlights in more thansimply visit based applications. Clients can converse with each other as a method for addressing each other's inquiriesor then again to assemble local area. At the point when clients can converse with each other, then, at that point, they get moredata. Presently we don't have talk area however in ongoing we will assembled visit segment in ourapplication.

## VII. REFERENCES

[1]."Predicting Personality Using Answers to Open-Ended Interview Questions" https://ieeexplore.ieee.org/document/9121971W.-K. Chen, Linear Networks and Systems. Belmont, Calif.: Wadsworth, pp. 123-135, 1993. (Book style).

[2] V. James Henry Behrens, "The utility of the FIRO-B for the study of college roommate compatibility", Cornell University, 1976.

[3] https://www.rent.com/blog/best-apps-finding-a-roommate/R. Nicole, "The Last Word on Decision Theory," J. Computer Vision, submitted for publication. (Pending publication).

[4] https://www.tibco.com/reference-center/what-is-logistic-regression.