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Swasthya Aahar App

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Abstract: ***In contemporaryry world, People are very busy because of their hectic plan and lifestyle so they are not able to concentrate on their diet, health and fitness -***
So we came up with a solution of Swasthya Aahar app - the absolute diet app that provides you to generate bmi according to the user's input details provided by them, With the help of ai we will be going to generate diet chart plan for each user. It gives you a platform to show your diet plan according to the inputs provided, set reminders and notify what to eat in breakfast lunch and dinner and Snacks,we can give the feedback that what improvements can be made and a personalised diet bot feature is there for each user for asking queries ,for resolving issues personally related to their diet.
Keywords: Dietbot , BMI, Diet chart, Feedback .

I. INTRODUCTION

Good health is a dream of those people who is suffering from hectic life or any disease and illness.
Everybody wants a healthy lifestyle if he/she is young or old or he/she belongs from a rich or poor family.
So If we follow a proper diet like eating plenty of fresh vegetables, non processed foods , drink 3 litres of water everyday, exercise or do meditation daily and try to get sleep of 7-8 hours daily which can lead to a proper healthy life style, But in today's world where everybody is busy in their work they are not able to maintain their diet and they don't even want to waste their time and money with the dietician . Some people can't afford to pay and some don't have so much time .
So we came up with a solution of an app : Swasthya Aahar App an app where user needs to give their information and from the given input BMI report will be generated of a particular person and by using bmi result the diet chart plan will be generated . we are also having a diet bot feature where you can ask any queries suggestion help regarding your diet .

II. BOOK RESEARCH

A. Existing System

In the existing systems we have seen that there are lots of apps in the market available but the customers are not satisfied using those apps they are not getting appropriate results if suppose user wants to do weight loss and if he/ she is using the app and the weight is same after following all the diet plan then that app is useless if it has not success rate whereas we founded some bugs in previous apps, so the user can't change his/her diet plan, not all users know how many calories, protein they have in the food they eat, and if they're out. If they are not going for a job or a vacation, they cannot change their diet according to the food there.

Sr. No	Paper	Remarks	Limitations
1.	"Online Dietician using Artificial Intelligenc.Shaikh Saqib, Khan Vaqui, Shaikh Mohad Ashfaque	This is a web page which include functions like body type,Height,weight and provide BMI report and suggest diet plan. Diet plan varies from person to person and by age.	The android mobile user won't be able to insert or view details if the server goes down. Thus, there's disadvantage of single point failure. No Inbuilt personalized customization of meals depending upon one's preferred foods.
2.	Virtual Nutritionist using AI Siddarthan Chitra Suseendran, Nanda Kishore B, Josephus Andrew, M.S.Rajyashree	Virtual nutritionist using artificial intelligence which is used to support a human's body type goals customized for his/her specific lifestyle by taking everything relevant for a diet into account from just few clicks at home rather than meeting a real nutritionist.	The data Recorded was not analyzed based on one's medical or pre medical conditions and pop out suggestions on few things not to do in order to improve one's health. No Reminders for every meal
3.	Virtual Dietitian: An Android based Application to Provide Diet. Prof. Prajkta Khaire, Rishikesh Suvarna, Ashraf Chaudhary.	This application provides the user with a complex algorithm which can provide the user with a diet plan based on his/her characteristics like height, weight ,BMI etc.	feedback suggestion, focus on improving the overall performance of the system. Also, interaction between guider and dietitian through video calling and secure prescription will be focused upon.
4.	Fittrax – AI Diet Consultant -by Adarsh Kumar Singh , Aman Rathore , Ayush Agarwal and Anuj Agarwal	The complete healthcare app that gives you access to authentic, time-tested and credible healthcare knowledge, which will help you lead a natural, simpler, fit and healthy life	Video calling facility , the food which you are eating contains how many calories.

Fig 1. Features and Limitations of Previous Papers

Sl. No	Paper	Remarks	Limitations
5.	"Professional Study on Chabot's Using Artificial Intelligence" CH.Srilekha, C.Sneha, G.Naga Prathyusha, Mr.C.Kishor Kumar Reddy, Dr. B V Ramana Murthy.	A Chabot is used to make the conversation between the user and the system feel natural and human-like. Recently, the development of conversational system as a medium of conversation between human and computer have made a great progress.	Chabot's are not able to memorize the past conversation which forces the user to type the same thing again and again.
6.	"A Chat-Bot based Multimodal Virtual Guide for Cultural Heritage Tours" A. Santangelo, A. Augello, A. Gentile, G. Pilato	A chat bot based multimodal virtual Guide for cultural heritage tours. In this paper, A chat bot developed for cultural heritage tours In this chat bot uses a natural language processing [NLP] module that provide natural language sentences interpretation mechanism that follows a pattern machine scheme	When the user makes a request, a multimodal browser appears For matching grammar files. If a match is found, and The user confirms this, responds to the application request and the multimodal browser loads a new page, otherwise It asks the user to repeat the question.

Fig 2. Features and Limitations of Previous Papers

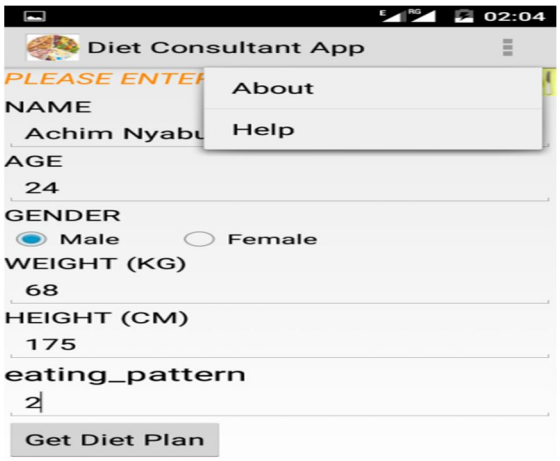

Fig 3. Features of Previous Apps

B. Proposed System

In the proposed system we will be taking some detailed information from the user as well as we will be adding some advance feature along with the basic one like we're going to get all the information from the user. Their name, contact number, age, gender, height, weight and their daily activities, their body type, how their diet is vegetarian, non-vegetarian. Accordingly we are giving them their diet plan. We are taking information from the user, what disease they have, such as how long they have had the disease,what food they are eating on that disease, we are giving them a different diet plan accordingly.Our app will have a feature called Dietbot, so if the user has any questions they can ask them there, if they want to go out for 1 week, if they want to go on vacation or work they will be suggested what kind of diet they prefer. We will also give the option of snapshot, by using which you can see how many calories and proteins are in the food of the user. We are also giving the option of reminders so that they can follow the same diet on time and we are giving another feature feedback which the user can use to give the opinion to the admin.

III. ARCHITECTURE

A. System architecture

System Architecture of the system describes the important building blocks of the system. The main purpose of this block is to design possibilities of the proposed system, such as architectural design, block diagram, use case diagram .

Below diagram display the properties of the proposed system. The proposed model consists of Login, My diet plan, Reminders, Generate BMI, Snap, Personalized chat bot and feedback features.

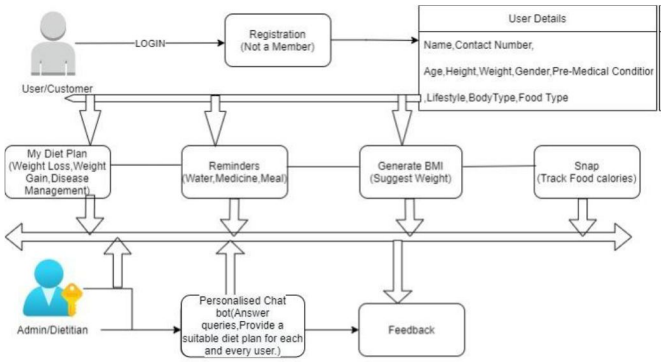

Fig 4. Block Diagram of the proposed System

B. Use Case Diagrams

Use case diagrams are usually referred to as behavior diagrams used to describe a set of actions (use cases) that some system or systems should or can perform collaboration with one or more external users of the system (actors) .

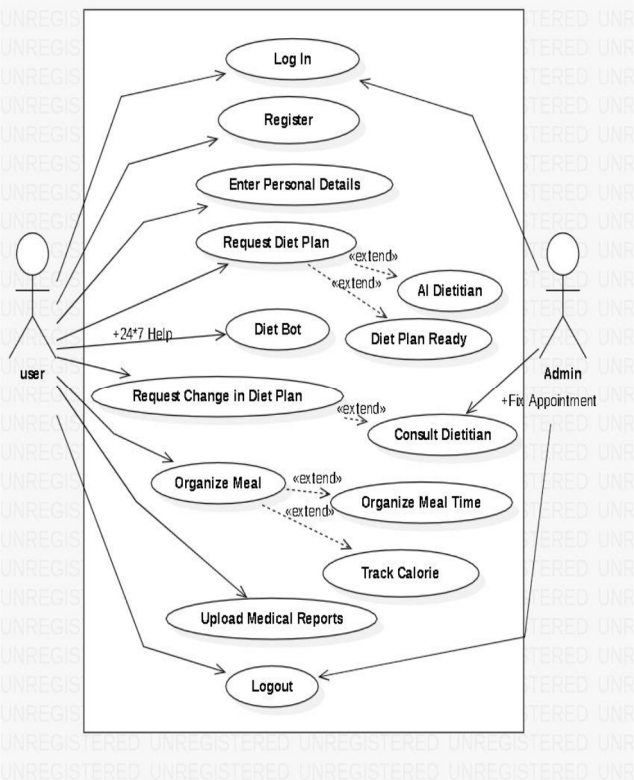

Fig 5. Use Case Diagram of the Proposed System

C. Data Flow diagram

It provide the visual representation of the information flows in system.It shows how data flow , what data changes the information and where data is stored. Swasthya aahar app data flow diagram is used as a preliminary step to create an overview of the diet application without going into great details,which can later be elaborated. It contains new user,bmi for underweight ,overweight and for normal person and display the diet chart.

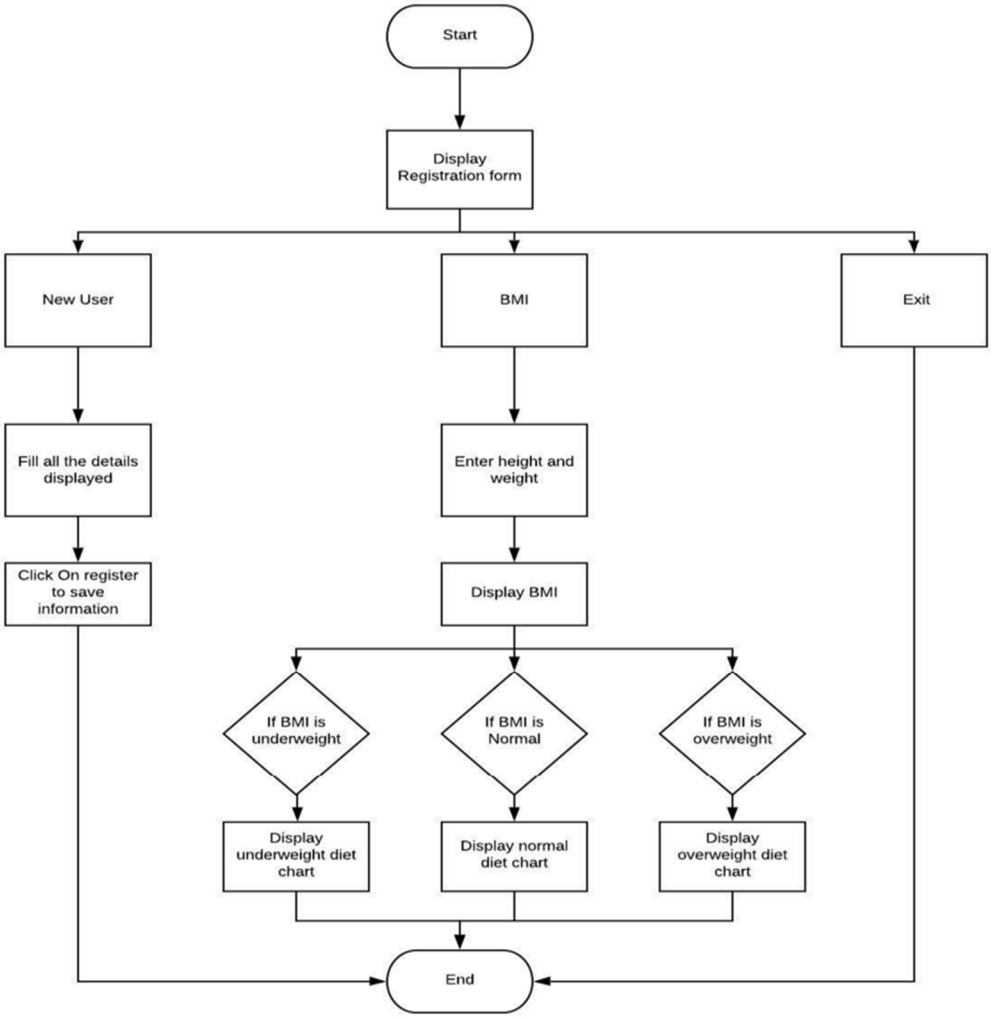

Fig 7. Flowchart of BMI and Diet Chart Module

IV. METHODOLOGY

1) *Step 1:* Start the application and if you have not registered yourself then first register yourself
2) *Step 2:* If already registered then the user needs to logged into the application he/she must answer the following inputs that are:- • The users name. • User's Gender • The users age. • The users height and weight. • The users body type(i.e. ectomorph etc..) • The user lifestyle(sedentary , active etc..) • Extra activities(i.e. Plays sports ,Gym etc..) • The users goal with time line(weight gain or weight loss) • Premedical conditions(diabetic, thyroid) • Preferred type of diet(keto , none, etc..) • Preferred food type (veg, non- veg, gujrati, punjabi, marathi etc..)
3) *Step 3:* Once the user has completed entering the following inputs, these inputs are validated and the necessary information's regarding these inputs are retrieved from the server and is calculated accordingly with the help of supervised and unsupervised machine learning algorithms that helps the user to get a proper desired diet
4) *Step 4:* Now Body mass Index will be calculated by the inputs provided by the user Formula for BMI: BMI = Weight / Height* 2 Where, Weight is in Kilograms, Height is in Meters
5) *Step 5:* According to the BMI results the Diet Chart plan will be generated according to the inputs provided by them. (i.e . breakfast, lunch,snacks, dinner
6) *Step 6:* There will be a home page in which all the features and modules will be present for both admin side and the user side . (Show BMI results, Generate Diet Plan , User Profile , Dietbot, Feedback
7) *Step 7:* The user can add their name , age ,height weight and they can update their profile as well

8) *Step 8:* The user can chat and ask their queries related to their diet and the diet plans and they can ask them to change their diet plans according to their needs
9) *Step 9:* The user can give their feedback or suggestions regarding the app so that we can improve more.

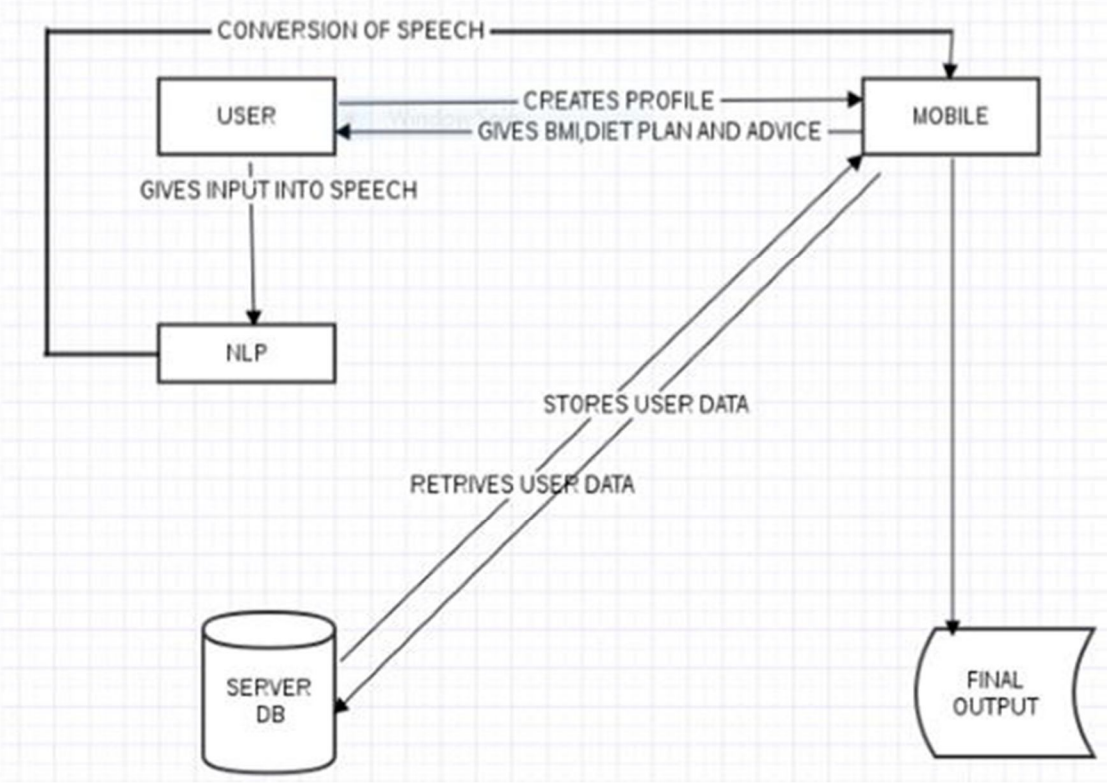

Fig 8. Data flow Diagram of the system model

V. IMPLEMENTATION

A. *Results*

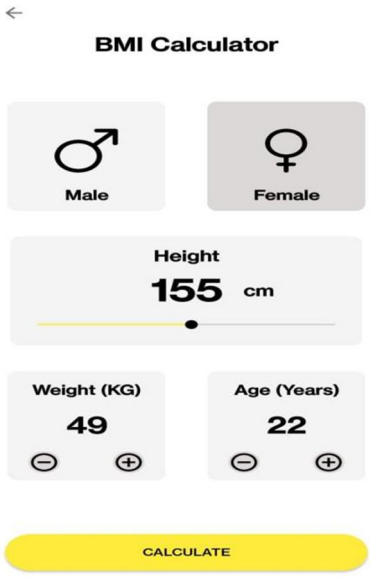

Fig 9. BMI Calculator

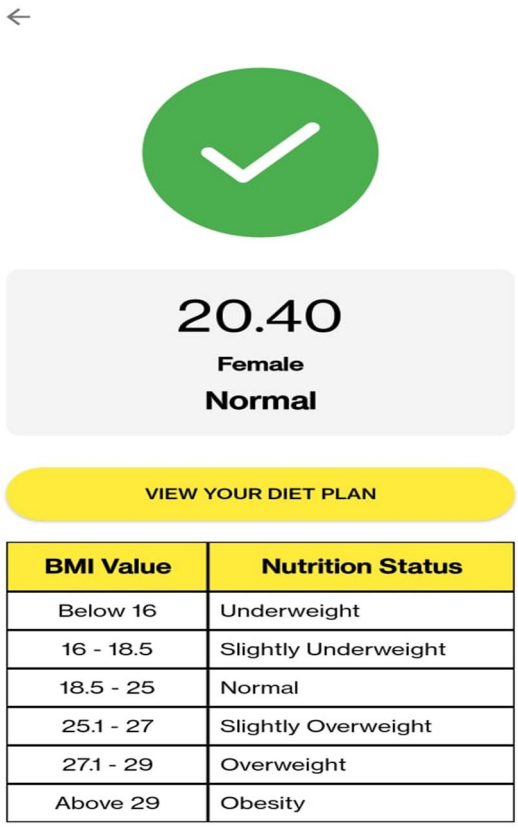

Fig 10.View Your Diet Plan

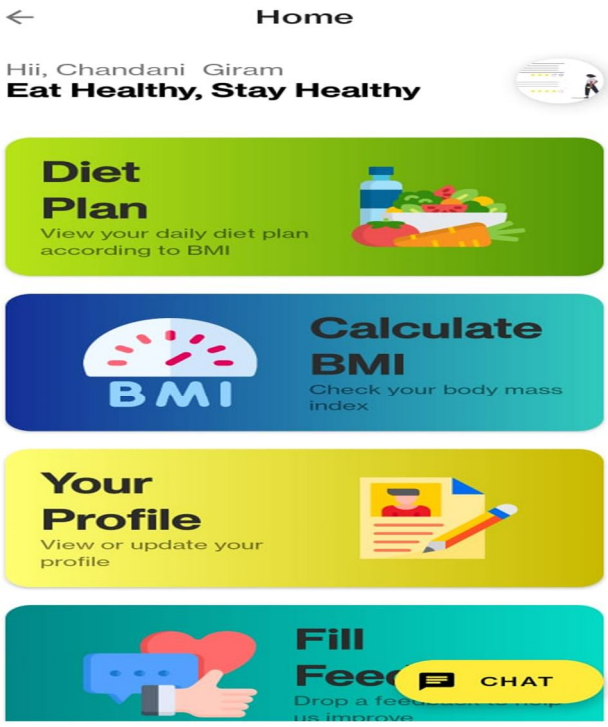

Fig 11. Home Page

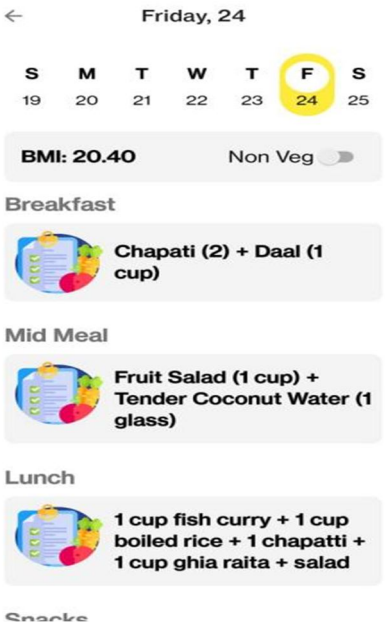

Fig 12. Diet Chart Plan

VI. CONCLUSION

Our approach for implementing this project is we have implemented the artificial intelligent dietitian using android. This project is a highly efficient because it uses the naïve bayes classifier for detecting and categorizing the disease and bot can be used as an information access system where users can use natural language dialogues to access information. I have introduced a chatbot in this paper that uses Wikipedia as a secondary knowledge base and diet plan generated for the user in order to meet the daily calorie level.

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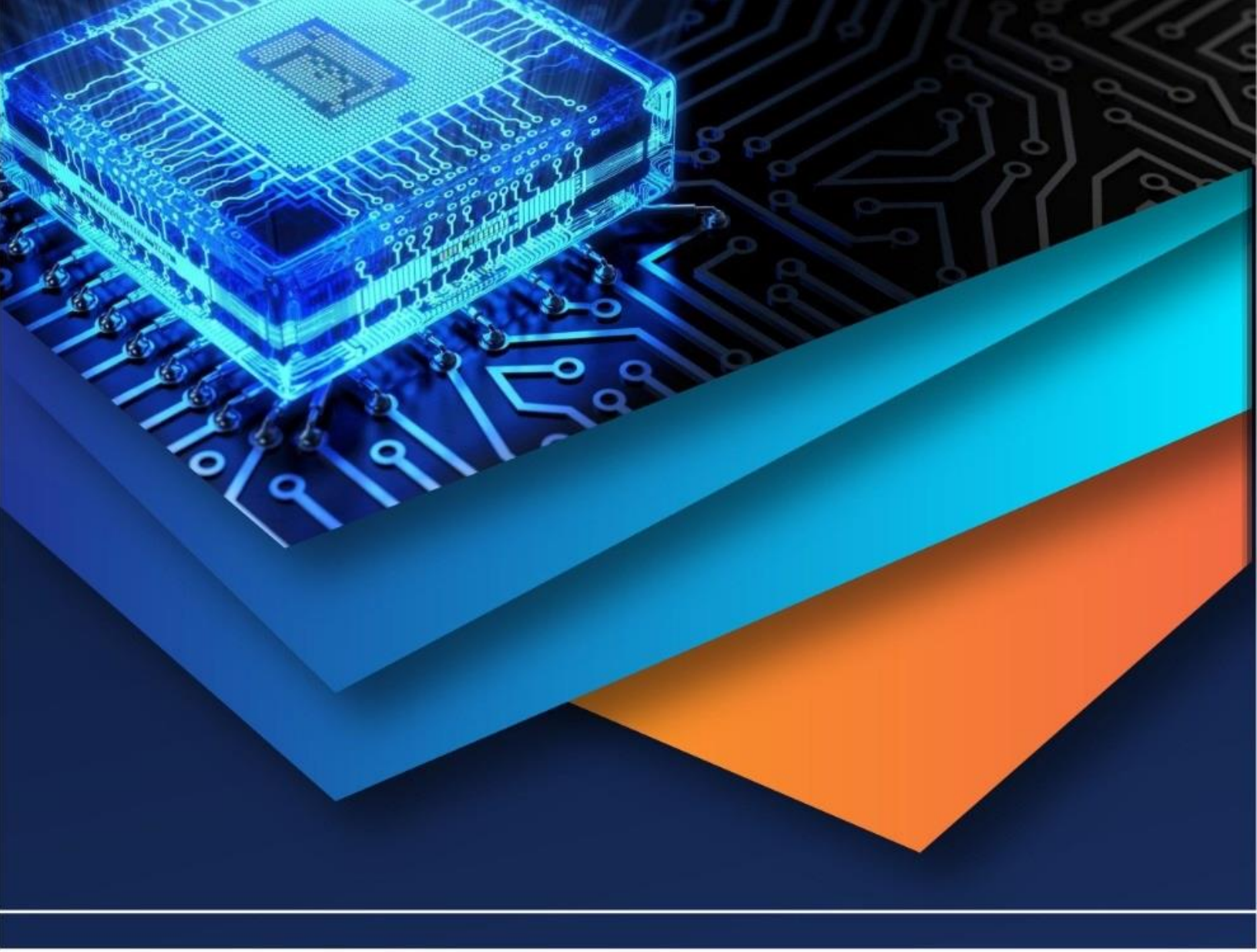

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