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SPACE: Social Platform Assisting Community of Entrepreneurs

Nanda Kumar M[1], Kema Sai Darshan[2], Yellapragada Bhavyasri[3], Kuttiparambil Sourav Nair[4]
[1]*Assistant Professor,* [2, 3, 4] *Student, Department of Electronics and Computer Engineering, Sreenidhi Institute of Science and Technology, Ghatkesar, Hyderabad, Telangana, India.*

Abstract: ***Entrepreneurship is a process which promotes individuals to create or establish new businesses. Entrepreneurship not only, helps the person practising it, but also plays a major role in improving a country's economic value. A country that is rich in resources should also be able to channelize those resources. This will be done with the promotion of entrepreneurship as it deals with the upbringing of many new businesses. The journey of an entrepreneur is not a cake walk either. One might experience various kinds of problems from finding an opportunity to solve a problem to maintaining the credibility of the company one might establish over the years. Over the years entrepreneurs find problems or opportunities by being an expert in a certain field, observing the society around them, or by interviewing people present in the domain of their interest. The proposed solution aims at providing a social media platform to the budding entrepreneurs to explore a wide range of problem areas that exist in the society. One can claim the problem that they might find interesting showing their interest towards solving the problem by coming up with an innovative solution. The platform also aims at providing the entrepreneurs with a wider range of users or customers based on their field of operation. This helps them to conduct surveys and market their products to the targeted customers.***
Keywords: Entrepreneurs, Consumers, Investors, problems, surveys, business plans, opportunities, social media.

I. INTRODUCTION

The term "Entrepreneur" was taken from the French word *entreprendre* which means to undertake, and is used to describe an individual who creates or establishes a new business. This act of setting up a new business can be labelled as entrepreneurship. This activity holds a huge value in indicating a country's socio-economic development. It aims at making an individual, group or an organization a job provider and not a job seeker. In short, we can state that it helps increase the standard of living, motivates people to innovate, contributes to community development and also has an impact on the country's economy.

Entrepreneurship also has an impact on country's exports. As an enterprise grows, it often leads to the expansion of the business to foreign markets. This helps in increasing currency in-flows and therefore contributes towards the economy. Entrepreneurs invest capital and attract capital from the market as well. Their productive way of pooling capital, creating wealth and providing jobs hugely contributes towards the societal development of a country.

Entrepreneurs combine a variety of factors of production i.e., land, labour and capital to start a new business venture. They are a vital part of free market as they assist in responding to price change and customer preferences. They help in bringing new technologies to the market thereby, helping to increase the standard of living. They also assist in increasing productivity by competing with existing market competitors.

An entrepreneur does not just strive for profits, they aim to solve problems in our everyday life by introducing new products into the market. This search for problems is usually done by following traditional methods such as observing one's surroundings. For example, Fitbit introduced watch bands that helped their customers keep track of their workout routines and also monitor heartbeat and stress levels. Another method of finding opportunities to solve existing problems is through surveys. Conducting surveys and interviewing a certain group of people to find out the problems they face can help in initialising the start of a new business venture.

II. LITERATURE SURVEY

Based on the literary survey performed for this project, it was found that *market research* is one of the necessary steps for entrepreneurship as it helps entrepreneurs know their target audience/customers. The traditional methods for market research include focus groups/surveys, incorporating social media data etc. These methods can be split into two categories namely, primary and secondary research. [3] The primary research or the field research is done by running focus groups or conducting surveys. The secondary research or the desk research is done by other people. This includes studies carried out by company's financial data. A detailed explanation on these methods is as follows:

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A. Focus Groups

This is one the easiest ways to conduct a research. It involves gathering a bunch of people into a room and ask them questions while recording the entire session. These questions could include product ideas or user feedbacks. Based on these discussions the researcher can conclude with appropriate insights. The participants of these groups are usually chosen based on certain criteria, such as demographics, interests, or occupation. A focus group discussion is successful if it involves natural conversations and discussions among the participants. Unlike a survey that is restricted to a fixed set of questions, a focus group discussion can go off on tangents unpredictable by the researcher. The nature of discussion aids in recognizing potential factors that skew the resulting data.

B. Surveys

This method involves giving a set of predefined questions to the respondents i.e., in person, over the phone, emailed, or an online form. These questions can either be close-ended or open-ended. Conducting surveys is a great way to perform market research because of the range of question formats. It also depends on the type of questions as good questions lead to good analysis. Precise and unambiguous questions help in good survey results.

C. Interviews

In this type of market research, the researcher speaks directly with their respondent. This method is more personal compared to others and therefore, allows communication and clarification, making it good for open-ended questions. Additionally, interviews enable the researcher to go beyond surface-level responses and research deeper. But the downside to this method is that it is time-consuming and expensive.

D. Observation

This is a qualitative research method wherein the researcher observes their customers in a controlled environment. These observations are then analysed to find patterns. The idea behind this type of market research is that subjects are likely to behave naturally, which reveals their true selves. Retail is one such instance where this method applies well as the observer/researcher can observe their customer's(shopper's) behaviour and analyse patterns. However, the downside to this method is that it's time consuming. Apart from market research, *investment* is needed for an enterprise to flourish. Entrepreneurs acquire investments from investors by pitching in their business plans. [4] The various ways to gain investor's attention by entrepreneurs to pitch in their business idea is as follows:

1) *Pitch Events:* A pitch event/contest is where entrepreneurs pitch in their business ideas to an audience which also consists of a panel of judges which comprises of venture capitalists and/or angel investors. The main purpose of these type of competitions is to earn investment capital. Usually, these contests have certain rules and parameters which involves various entrepreneurs competing with each other.
2) *Crowdfunding platforms:* Entrepreneurs can pitch in their business plan by posting the details on a crowdfunding website which helps raise money. The upside to this method is that it helps avoid going to the bank for loans. This method is labelled as crowdfunding as 'crowd refers to people/ organisations that help raise money. The downside to this method is that there is no guaranteed return for the investors.
3) *One-on-One Meetings:* Meeting venture capitalists or angel investors personally is another method. Venture Capitalists are those type of investors that do not use their own money but that of the firms to invest in a potentially promising business idea. Whereas, Angel investors are those type of investors that invest capital in a start-up using their own money. The downside to this method is that it is difficult to contact and set-up appointments for one-on-one meetings with these types of investors, in order to present the business plan to acquire investment capital. The insights of the literary survey also revealed that *problem identification* is the root of any start-up. Problem identification helps in leads to R&D of any new product or service idea. [5] The traditional methods used to identify problem include observing everyday surroundings, hackathons or conducting surveys involving a certain group of people. These methods also involve potential risk of a product failing after being introduced into the market. These existing methods that entrepreneurs use to start a new business need to be assisted with a well-knit community, in order to help the entrepreneurial society on their road to success. In that way the entrepreneurs can make their market survey techniques reach a wider audience and the business pitches can reach to wide range of investors.

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III. PROPOSED SOLUTION

The proposed method aims at upgrading the existing ways by introducing a social media platform for the entrepreneurial community. This platform improves the existing methods of problem identification, market research and search for investment which would help in assisting the entrepreneurs. This social media platform provides access to various problems that need solving, wide range of audience for market research or user-oriented feedback and a simplified and efficient way to pitch business ideas to investors. The purpose of this platform is to aid entrepreneurs in their entrepreneurial journey.

The social platform allows customers to post problems from their everyday life which aids in problem identification for entrepreneurs. As this method provides access to a list of problems categorised according to their domains, this sets it apart from the traditional methods of problem identification which are usually followed by entrepreneurs.

Problem Identification usually initiates the start of any start-up. Therefore, solving problems whose solution have a potential market demand boosts the entrepreneurial process. Unlike the traditional ways of identifying problems i.e., observation, conducting interviews and working on a desired product/service; the proposed solution provides access to a list of problems (posted by consumers) categorized according to their domains that need solving.

Furthermore, the platform also helps entrepreneurs conduct user-oriented feedback or market research. The surveys posted by entrepreneurs can be answered by their potential customers, which consequently gives more accurate results as it involves feedback from their target audience. The upside of this method compared to the existing market research methods is that it is time-saving, faster and involves direct feedback from target audience.

The proposed solution also gives a platform for entrepreneurs to pitch in their business plans to the investor community of the social media platform. In contrast to the existing method this social media platform gives entrepreneurs an opportunity to acquire investment capital hassle-free.

The social media platform is a mobile application with a variety of features that benefit the customer, entrepreneur and investor side of the platform. The customer community side are awarded with reward points whenever they answer a survey posted by the entrepreneur community or when a problem posted by them is claimed by someone form the entrepreneurial side.

The reward points which can be cashed-in later on act as encouragement for customers to actively participate in surveys and problem identification.

Additionally, this also allows them to contribute towards entrepreneurship. The entrepreneur side of the mobile application allows entrepreneurs to surf through the list of domain specific problems posted by the customer community and claim a problem that interests them. It also allows them to post surveys for the customer community as means for conducting market research.

Furthermore, it allows them to pitch-in their business plans to the investor community of the platform. The investor side provides users signed up as investors an access to a list of business plans which they can invest on. Investors can easily find promising business models to invest.

The proposed social platform is therefore labelled as ‘SPACE’ which is an acronym for: Social Platform Assisting Community of Entrepreneurs. The title of this solution aptly depicts the purpose and aim of the solution which is to assist the entrepreneurial community in their journey.

IV. TECHNOLOGIES INCORPORATED

A. Firebase

Firebase is a mobile application development platform which was designed and developed by Firebase Inc. which was then later acquired by Google in the year 2014.

B. React-native

React native is a mobile application framework created by Facebook in the year 2015.[11] It is an open-source framework which helps in developing applications for Android, Android Tv, iOS, macOS, Web, Windows etc.,

C. Redux

Redux is a JavaScript library used to manage the application state. It is most commonly used to build the user interfaces and are used with libraries such as React, Angular etc., Redux is a small library with a simple, limited API designed to be a predictable container for application state.[13] It operates in a similar fashion to a reducing function, a functional programming concept.

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D. JavaScript

JavaScript is a dynamic computer programming language which is used mainly for enhancing the interaction of a user with the web. It is client-side scripting language. It can be used to make webpages livelier and more interactive. It is an open-source scripting language which is light weight and creates network centric applications. It is platform independent and is often used to validate form data. It is widely used in game and mobile application development. The usage of JavaScript is not limited to webpages, it also used in many desktop and server programs such as Node.js. Furthermore, databases like MongoDB and CouchDB also use JavaScript as their programming language.

V. IMPLEMENTATION

1) Nodejs and npm should be installed, based on the operating system where the development and designing process takes place.

2) Expo CLI must be installed, which provides us with a platform to deploy and test the application while in the testing stage, expo also provides services like hosting the application developed and generating the .apk file for the react-native project bundle.

```
> npm install expo-cli –global
```

3) Log in to your expo account to use the services that it provides.

4) All the necessary packages must be installed using the following command

```
> npm install
```

5) Some of the packages used for this project development are as follows:

```
"@react-navigation/material-bottom-tabs": "^5.3.15",

"@react-navigation/material-top-tabs": "^5.3.15",

"@react-navigation/native": "^5.9.4",

"@react-navigation/stack": "^5.14.4",

"expo": "~41.0.0",

"expo-camera": "^11.0.2",

"firebase": "8.2.3",

"react": "16.13.1",

"react-dom": "16.13.1",

"react-native": "https://github.com/expo/react-native/archive/sdk-41.0.0.tar.gz",

"react-native-communications": "^2.2.1",

"react-native-vector-icons": "^8.1.0",

"react-native-web": "^0.15.7",

"react-redux": "^7.2.3",

"redux": "^4.0.5",

"redux-thunk": "^2.3.0"
```

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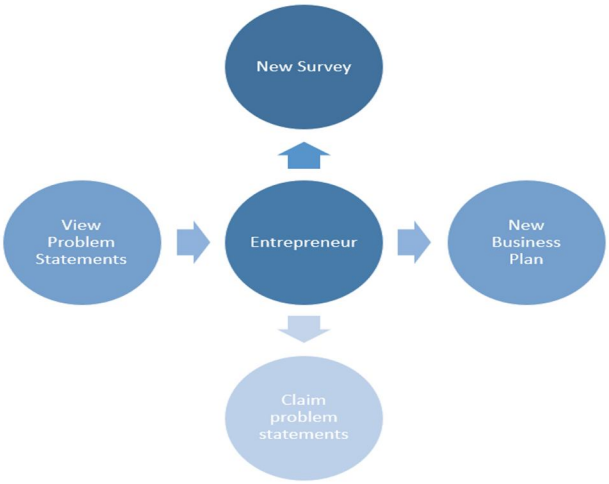
The react-native application is designed and tested using the services provided by Expo. The application only comprises of JavaScript files for both front end and backend frameworks. The designed app can be tested locally on the development server using the Expo CLI. The following command is used to run the application

> expo start

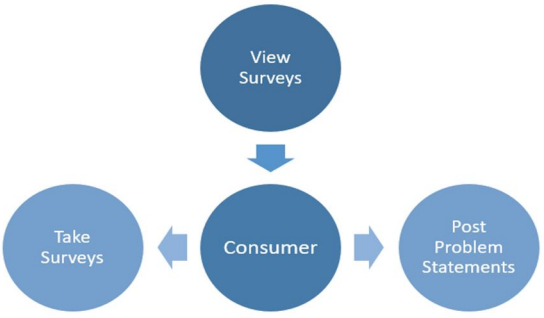
This starts the development server in localhost:19002. The project can be run on various platforms like android emulator, iOS simulator, web or on a physical device. This project is tested by scanning the QR code for the project through the expo go application, which helps us run the application on any physical device.

VI. FLOW DIAGRAMS

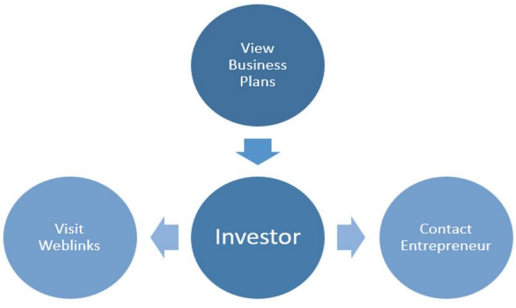
The mobile application work flow can be described with the following flow diagrams. The following flow diagram shows the working model for entrepreneur's interface.



The work flow for consumer's interface can de described by the following flow diagram.



The following flow diagram depicts the working model for investor's interface in the application.



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VII. RESULT

A mobile application has been developed with three main interfaces, namely, entrepreneur, consumer and investor. The following figures show the home screen of the interfaces respectively.

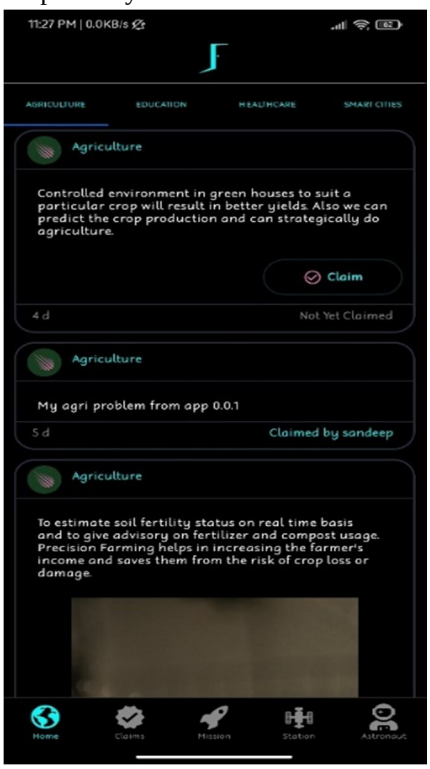


Figure 4: Entrepreneur Interface

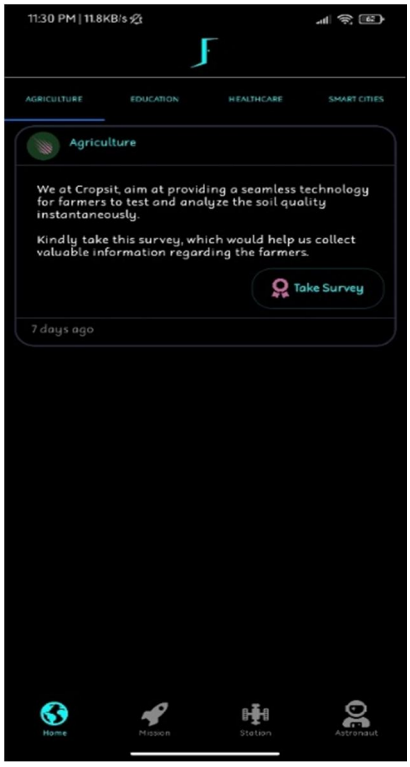


Figure 5: Consumer Interface

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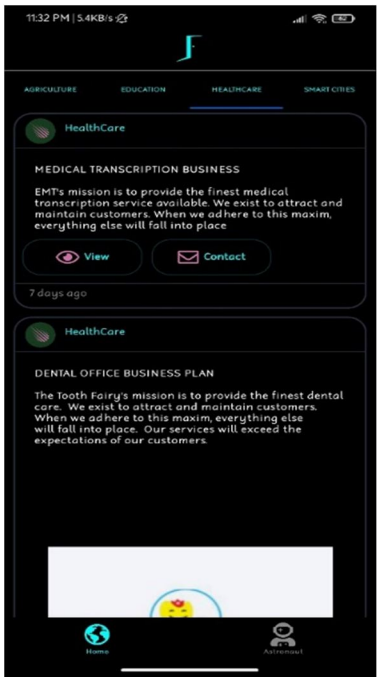


Figure 6: Investor Interface

VIII. CONCLUSION

The project successfully accomplishes the task of connecting three major domains of the entrepreneurial community. The application developed comprises of a seamless user interface which makes it easier for the users to connect with the community instantly.

As entrepreneurs keep introducing new innovations to increase the standard of living, it becomes necessary to support and assist them in their quest. The vision of this project is to contribute towards the entrepreneurial community and make their journey to success less challenging. The project aims at building a mobile application based social platform that assists entrepreneurs in problem identification, market research and acquiring investment capital. It allows customers to support entrepreneurs with R&D of new innovative products/services. It also allows investors to invest in promising business models. The influence of entrepreneurship over a country's progress is undeniable and as citizens aspire to dive into entrepreneurship, our proposed solution 'SPACE' aims at encouraging these budding entrepreneur's journey less complicated by assisting with market entry risks.

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AUTHOR PROFILE

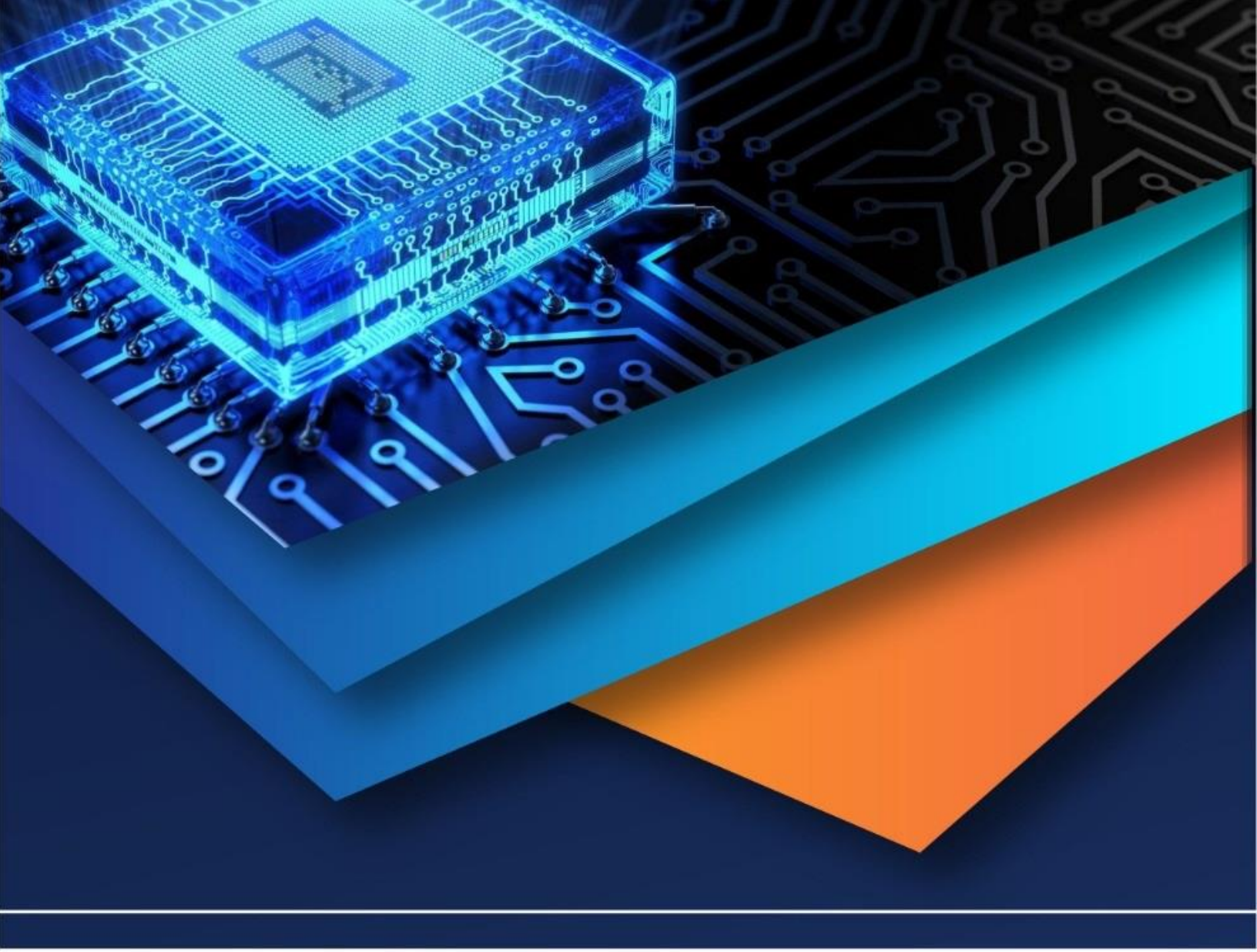
1) ***Nanda kumar M –*** Assistant Professor, Electronics and Computer Engineering Department, Sreenidhi Institute of Science and Technology, Ghatkesar, Telangana, India

2) ***K. Sai Darshan*** - Electronics and Computer Engineering, Sreenidhi Institute of Science and Technology (SNIST), part of Technology Entrepreneurship Programme (TEP), Indian School of Business, Hyderabad, India.

3) ***Y. Bhavyasri*** - Electronics and Computer Engineering, Sreenidhi Institute of Science and Technology (SNIST), part of Technology Entrepreneurship Programme (TEP), Indian School of Business, Hyderabad, India.

4) ***K. Sourav Nair*** - Electronics and Computer Engineering, Sreenidhi Institute of Science and Technology (SNIST), Ghatkesar, Telangana, India.

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