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Save Our Ships SOS-AN Android Application for Safety

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Abstract: ***In this paper, android applications are named SOS for smartphones and web applications, which are developed by java and XML using android studio. The main aim of SOS is to save lives with a single tap. It sends multiple text messages and emails while pressing the SOS button. SOS uses user interface and user experience design by a Machine Learning (ML) algorithms such as Application programming interface(API) to understand SQL queries and it provides a perfect response. Through the Dijkstra algorithm, this application employs Google Maps to trace the nearest way to an available time. SOS has a high level of accuracy in understanding user's needs and providing a response on time. SOS provides safety for children and girls without parental care.***

Keywords: *Android Studio, Java, XML, SQL , Dijkstra algorithm, Firebase , API*

I. INTRODUCTION

SOS stands for SAVE OUR SHIPS has primarily been used as an International Morse code distress signal.. SOS will help and support the children without parental care. The project is based on a multifunctional device that is highly advanced. The device has an inbuilt SOS button that can immediately notify pre-registered numbers and emails, The device must link to a mailing, phoning, and texting system through the internet and requires sensors and switches to transfer the data due to the availability of an auto-reminder system and an SOS button for emergency help. Application programming interface and Dijkstra algorithm interact with the SOS android application by java and XML.

A. Existing System

Currently, there are several android applications for safety purposes available in the market such as Disha, women safety, Sos alarm, and Sos alert emergency, these applications are designed to help users will protecting the lives of people in any emergency. Whether it's an unsafe situation, just TAP the SOS button, SOS alerts the contacts saved in the application and sends messages to the saved contacts.

B. Poposed System

The proposed system of SOS is an android application that is used for Application programming interface and Dijkstra algorithm and it is developed by java as a backend language by using android studio .it improved by an operating system having an application programming interface level 17 to 26. The application is working and implemented on android mobiles and smart devices. Dijkstra algorithm is providing system activated. Based on this algorithm GPS calculates the location of an application and then the GSM module sends an emergency message to family members and friends. The latitude and longitude obtained from the GPS are sent to the server via GPRS, and the server determines the nearest people by using the haversine formula to calculate the great circle distance. SOS is a user interface it allows to interact with android applications using smartphones. now it is going to play a vital role in the future era. This is the reason we have to choose an android technology to implement this system.

C. Technologies Used

The technologies used to develop SOS are Java and XML using android studio code it's a high-level programming language that is used in an android operating system. Android gives us the best platform for creating apps and games for Android users. Android integrated development environment (IDE) allows auto-completion to write code, debug, check, and execute the code on virtual devices. Some technologies are used to create Frameworks and Libraries, firebase is a web application, and its standard application data is stored in configurations of a Javascript object notation (JSON) to store data it uses the online database framework and it's a real-time database. Laravel framework is used for the PHP platform it is free and open-source and was developed by Taylor Otwell to build web apps on android architecture. PHP build a MVC(model, view, and controller) architectural

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II. METHODOLOGY

SOS was developed using java and XML. The android studio is used for developing an app by using an MVC architecture used as a real-time database.

The first step is app using Java and XML. To view the platform it can use the open source to interact with the user interface. The data was pre-processed using a high-level design such as the waterfall model.

The second step is to train the waterfall model will store data in the correct order to respond to the user interface it is divided into two types Design review and test. The design data is used for software development, and testing is used to test the performance of software development developed by machine learning.

Machine learning is integrated into the android studio using Java. SOS is a user interface designed by a SQL lite library.

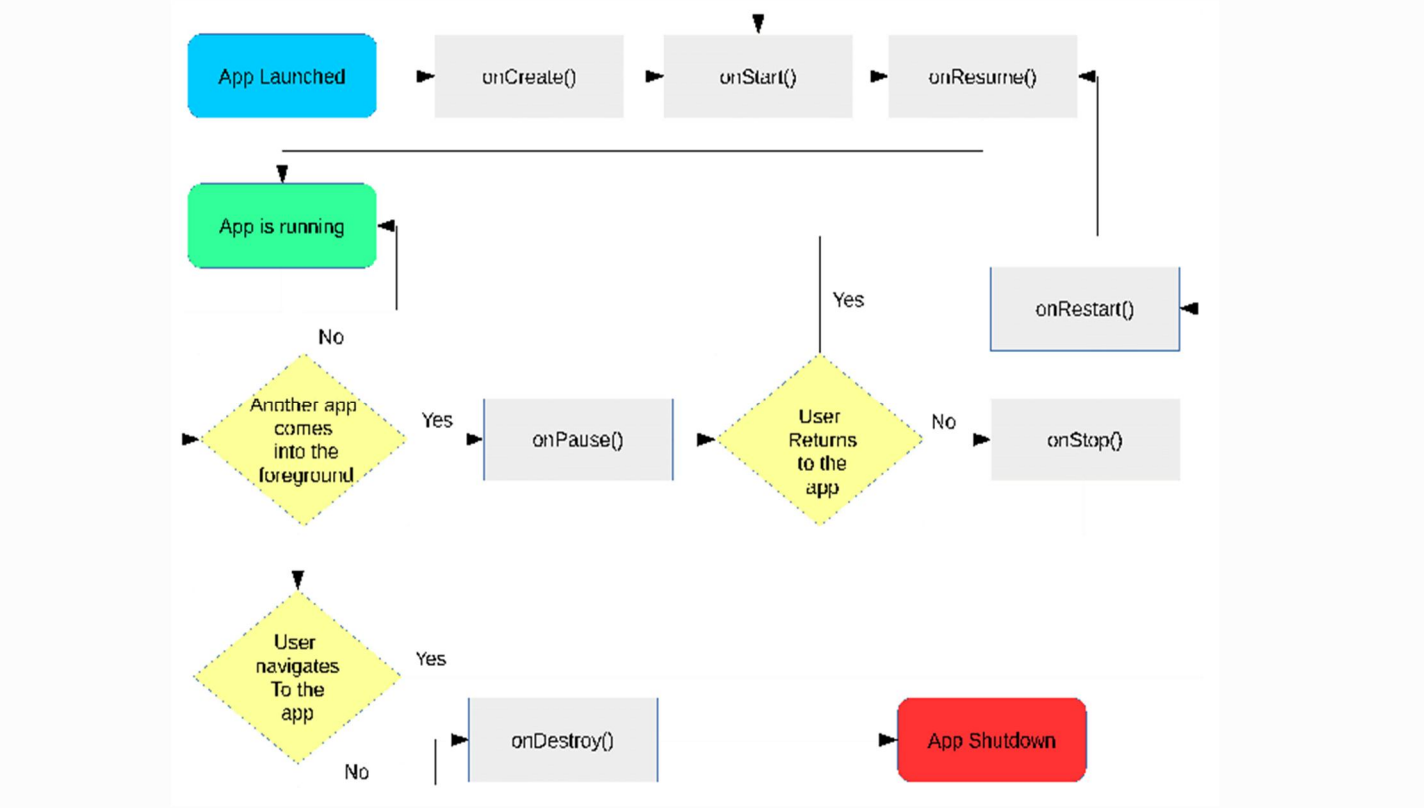


Fig:1 Architecture diagram

III. FUNCTIONALITY

The SOS user application should log in for the first time on the device. then the user can see the main page of the app the user shall able to set messages, and emails, from applications the user, shall able to send notifications with the tap of SOS button the user and client can see the current location. It allows a simple user interface for the main screen user will switch the screen if there is any panic or emergency. hence, each button will show visible. if there is no internet to track the location then the database should be stored offline once internet connectivity is on it goes on.

IV. SOFTWARE DEVELOPMENT MODEL

There are some phases to developing the software system.

1) *Requirement Analysis:* This is the used for the verification process. While it is developing system doesn't keep any discussion. The system is going to build a requirement document that will carry information regarding the function of the system, data, and user interface. it conveys the function of the system to the user
2) *High-Level Design:* After the requirements notes are ready they convert into the design. if there is something that doesn't fit right into the design the user will be aware of changing the plan.
3) *Detailed Specifications:* In the detailed specifications, the high-level design is again classified into sub-stages so that they can be studied and explained separately. Each module can separately be decoded by the programmer.

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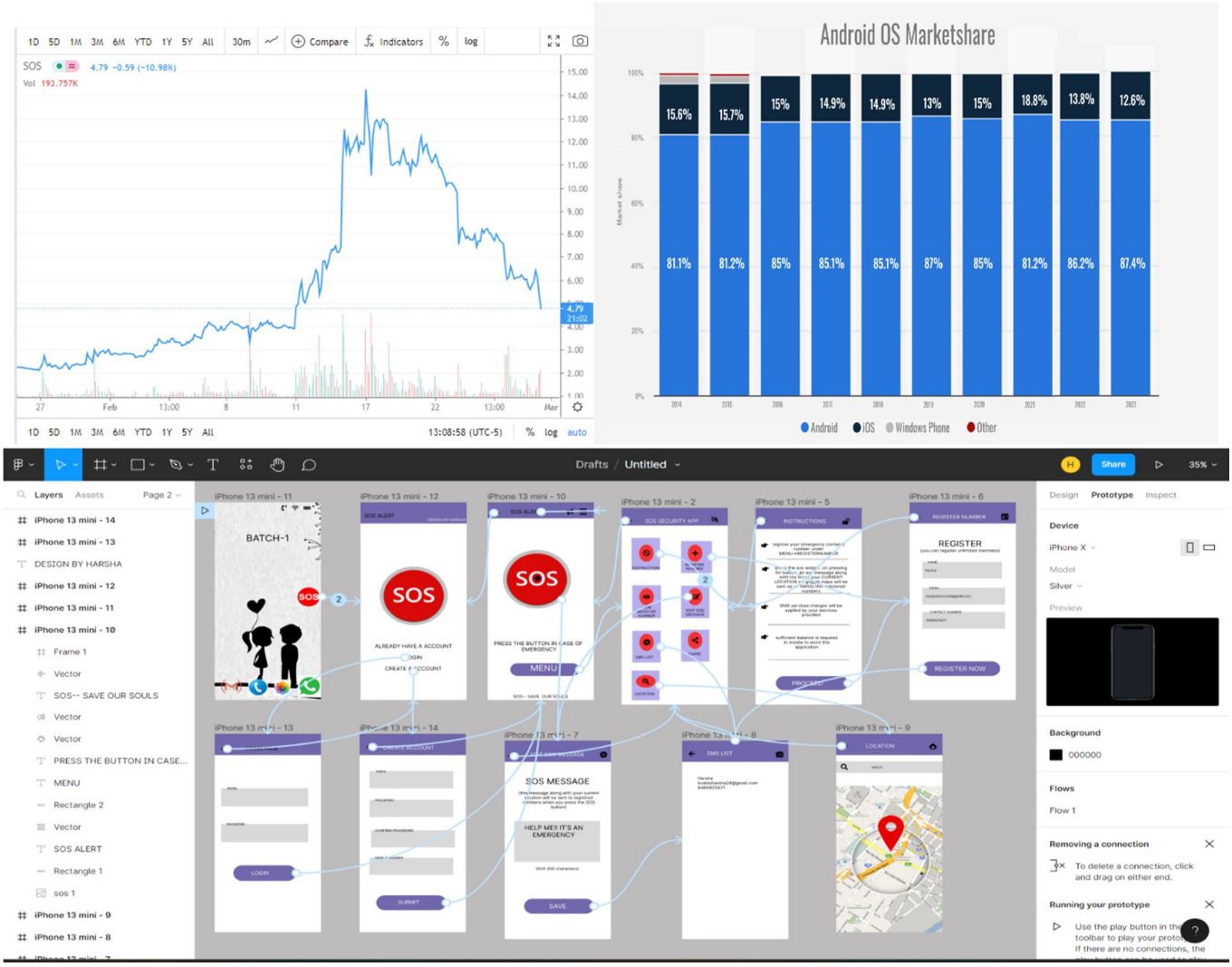
The Validation Phases of the model

a) *Unit Testing:* unit test is the smallest part while testing the programming system. integration testing and interface Testing are Done together to find the flaws in the interface

b) *Operational Testing:* In operational testing, it checks the interface testing while it checking the system meets the requirements of the previous integrated product

c) *Acceptance Testing:* In the acceptance test, whether the software is accepted or not will be checked in the acceptance testing it is checked by requirements documents .. if it's full fill all the documents then it proceeds to the release Testing

d) *Release Testing:* If it is any no judgment that has to be made for a product or software. That is release application for the use.



V. BENEFITS

The benefit of SOS is saving our lives Quickly. if we are in an emergency tap the button SOS then automatically system sends a message to contacts that are saved in the SOS app then it gets a quick response for the user.

1) *Ease of Use:* These applications are deployed for quick response for use in an emergency. technically it is difficult to use. The back-end user interface is designed to get a message quickly if they are any help.

2) *Delivery to Different Devices:* To get an alert it will send a message to different devices and different apps. such as Emails, SMS messages, and phone pop-up notification

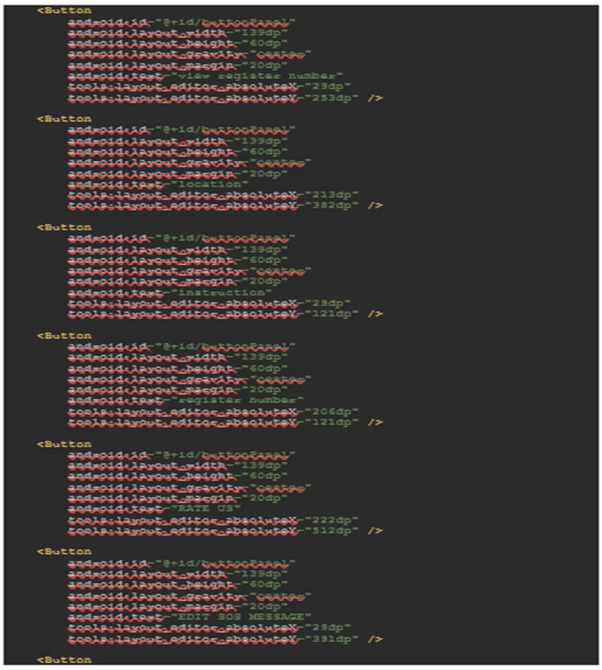
3) *Speed of Delivery:* SOS wants to keep people safe during an emergency, timing is a must and should. If you are busy with some work then send a notification message to your employees.

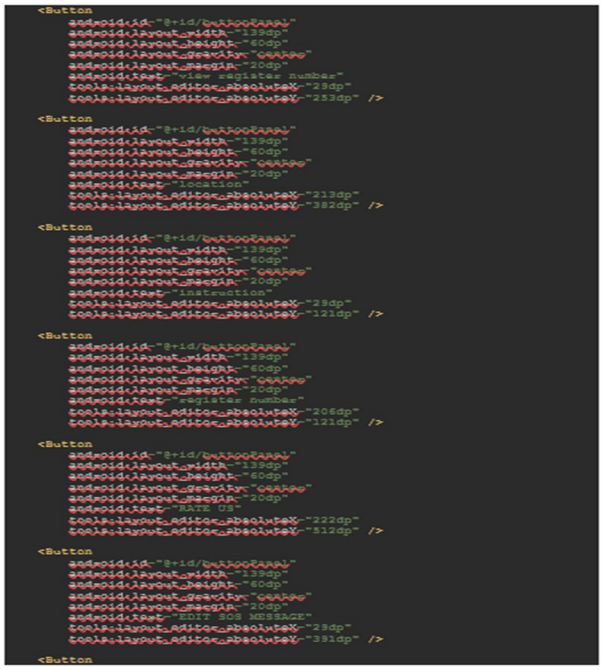
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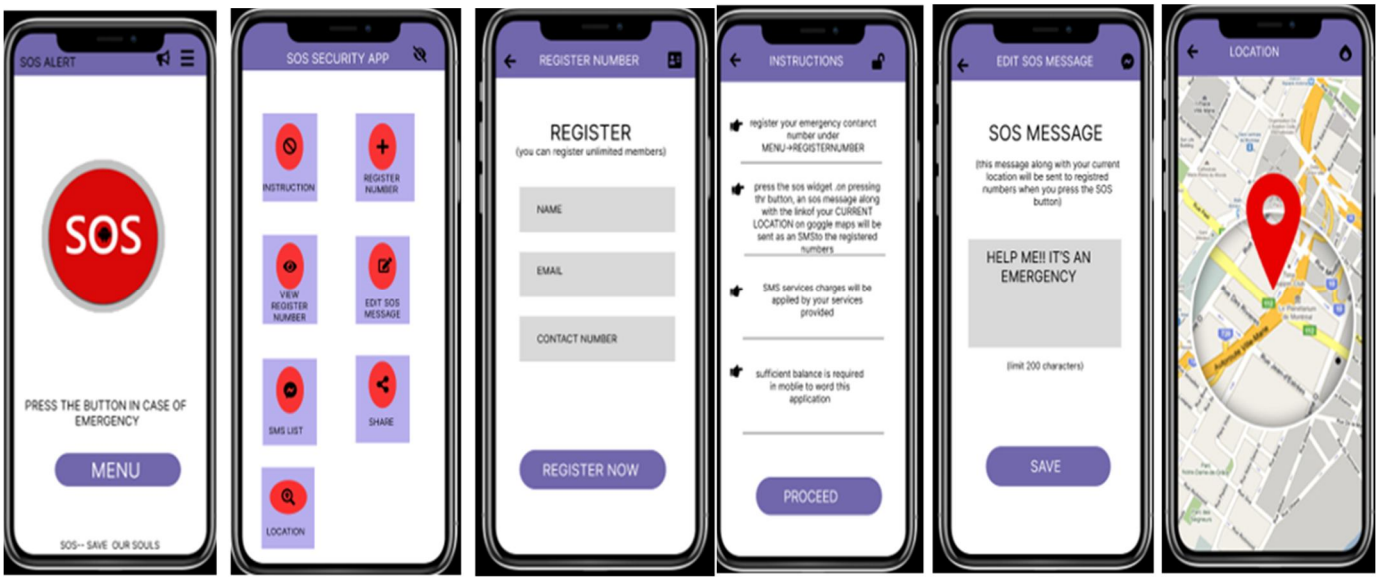
VI. DRAWBACKS

1) *Catastrophic Systems Failure:* In some particularly catastrophic emergencies, communications system becomes unavailable, due to damage to the system emergency notification cant be sent.
2) *Out-of-data Contracts:* If the user won't maintain the contact list then the emergency notification will not sent in critical situations.
3) *Prohibitive Costs:* There are some terms for using this application in Android. if the company terms are more expensive then it will work for a few years. after that, the notifications are not sent.
4) *Apathy:* some recipients are not taken seriously .it should be trained to understand why they need help and why they are sending messages

Source Code







Output Snapshot

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VII. FUTURE WORK

The SOS app can be used to for safety purposes in the lives of individuals in various users, including health, personal problems, and women's safety. The system features are used in case of emergency for safety it is very useful if already tapped the panic button it sends notifications, emails, sms messages. In case of any trouble to reply the message, the case person can track the location using the Dijkstra algorithm .this android application will understand android development and learn about SQL database, GPS application programming interface, and android perform the test for this SOS app.SOS is a more- expensive and high-level programming and more enhancement.

VIII. CONCLUSION

SOS is a creation of android studio using java back end programming language and XML to the user interface to the essential app to have in android mobiles for security purposes .app also keeps track of a location using the Dijkstra algorithm .this is very helpful to save our lives .through the research work I can find out in-depth knowledge of the programming language which is created in android application this application is developed on java framework as back end and JSP-servlet. The database is used to store by using SQL lite for android mobiles and SQL server for web services. This application is more advanced and has high-level accuracy in understanding response on time. SOS is helpful for all ages, especially for elders and children. the SOS'saim is to develop a system to protect against accidents or panic emergencis. It provides safety for children and women without parental care.

REFERENCES

[1] IDC.[Online]May25,2014. http://www.idc.com/getdoc.jsp?containerId=prUS24676414.
[2] Developers,Android Android basics. http://developer.Android.com/training/index.html.e
[3] Android details https://www.androidpolice.com/how-to-set-up-emergency-sos-features-on-android/
[4] www.gogglw.com https://www.google.com/search?q=www.google.com&rlz=1C1RXQR_enIN963IN963&sxsrf=APwXEdfQq7PG-KUd3MUf2plmFYURvtX4Bw%3A1680183356832&ei=PJAlZNy1MpeMseMPirKusA4&ve
[5] userinterfacehttps://www.figma.com/file/yL683Uvn3myHWySWZomO2u/Untitled?node-id=1-2&t=wQASQCX7pt10Gba5-0



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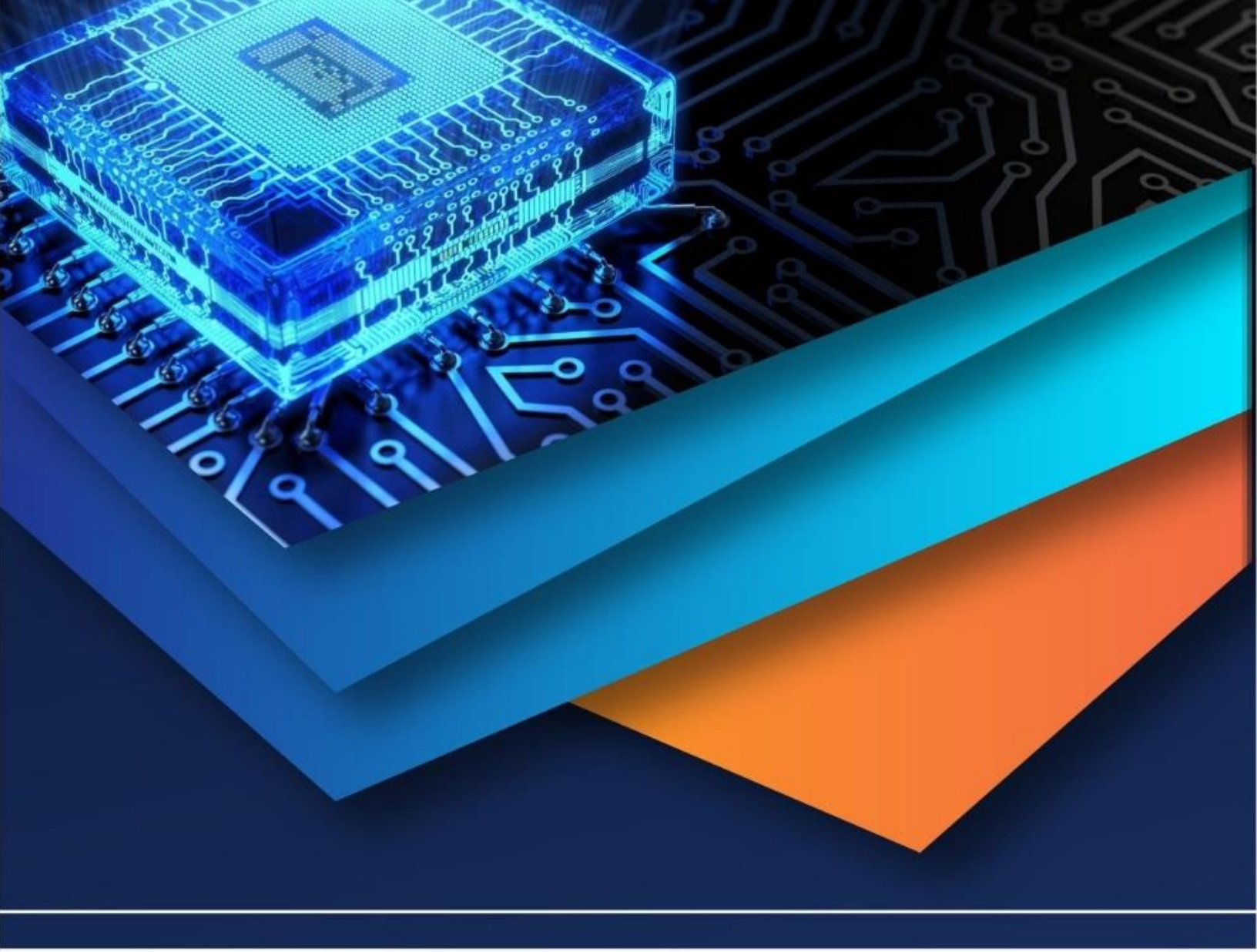
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