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A Review on Edu-Notify: Automated Postcall Text Messaging System

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Abstract: ***The Automated Post-Call Text Messaging System (APCMS) aims to transform how colleges connect with students and their families by sending customized information right after a phone call ends. This system seeks to improve engagement, boost conversion rates, and enhance the overall experience of inquiries about admissions. By automating follow-up communication, APCMS guarantees that each prospective applicant receives relevant information about the college's programs, facilities, and services, making the admission process smoother. APCMS captures essential details from calls made to prospective students and their parents, then automatically sends a personalized text message once the call is over. The messages provide useful information about the college, such as details on programs, campus amenities, scholarships, or upcoming events. This method ensures that potential students receive the specific information they need right away, increasing the chances they'll stay engaged. The system integrates easily with the college's admission management system, allowing it to gather relevant data and personalize messages as needed. College staff can effortlessly manage message templates, tweak content, and update details without needing advanced technical skills. The system also supports multiple languages, ensuring that all potential students and their families can access the information. By providing personalized and timely information, APCMS significantly boosts engagement and enhances the admission experience, making it more likely that inquiries will turn into enrollments. It's built to handle high volumes of inquiries, especially during busy admission times, and its ability to integrate with tools like CRM systems allows colleges to create a well-rounded communication strategy.***

Keywords: ***Automated Post-Call Text Messaging System, APCMS, personalized messaging, prospective students, parents, engagement, conversion rates, admission inquiries, real-time communication, admission management system, data privacy, multi-language support, analytics***

I. INTRODUCTION

A. Introduction

In our fast-paced, digital world, quick and effective communication is important, especially in education. For colleges and universities, it's essential to engage potential students and their families by offering a smooth, informative, and responsive inquiry experience. The journey from being just a prospect to becoming an enrolled student often starts with a single inquiry call. However, after that initial contact, students may feel uncertain or left in the dark due to a lack of follow-up communication. The Automated Post-Call Text Messaging System (APCMS) addresses this issue by offering an automated system that sends personalized messages right after a call ends.

B. Background

The admissions process at higher education institutions is very competitive. Schools strive to attract top students while also engaging them effectively to turn inquiries into enrollments. Many colleges rely on phone calls as a primary way to interact with prospective students and their families. These informative calls cover details about programs, campus amenities, fees, scholarships, and admissions.

However, with the large number of calls admissions offices receive, manually following up can be challenging. Without a systematic follow-up method, chances for conversion may be lost. Research in marketing shows that quick follow-up messages after an interaction can improve customer satisfaction and retention. This is equally true in education, where timely, informative follow-ups can provide answers, guide decisions, and keep the institution fresh in mind. While many businesses have adopted automated follow-up systems to maintain customer engagement, educational institutions have been slower to embrace similar advancements. The APCMS seeks to meet this need by automating and personalizing follow-up communication specifically for college admissions.

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C. Project Motivation

Prospective students often show interest in colleges through inquiry calls. However, when there is no structured follow-up process, they may miss important information or lose interest if responses take too long. Studies show that timely engagement boosts customer satisfaction and increases conversion rates, which is directly applicable to admissions. By automating follow-up messages, APCMS helps fill the gap in traditional communication, allowing admissions teams to stay responsive without adding to their workload. This initiative stems from the need to make inquiry responses more efficient and improve the experience for prospective students, ultimately increasing the chances of enrollment.

II. LITERATURE SURVEY

Paper Title	Author Detail	Description	Limitations
Automated text messaging for patient self-management in the Veterans Health Administration: A qualitative evaluation	Vera Yakovchenko, D Keith McInnes, 2021 (JMIR	This study looks at automated messaging in healthcare, where patients receive texts after phone consultations with their doctors.	The system had issues with personalizing messages.
Post-Call SMS Messaging for Business Communications: A Case	S. Kumar, L. Davis, 2020 (IEEE)	This paper examines a corporate messaging system that automatically sends texts after business calls.	Challenges arose in keeping customer call records and scheduling.
Evaluation of SMS Notification Systems in Education: A Comparative Study	F. Ramirez, T. Silva, 2021 (Computer and Education Journal)	This research compares various SMS notification systems used in schools, assessing how effective their messages.	Some students felt overwhelmed by too many notifications.

III.SYSTEM REQUIREMENT

A. Software Requirements

1) Operating System: Compatible with Windows to support a variety of server environments.
2) Programming Languages: Primarily Android, XML for user interface, and Kotlin for the backend.
3) Database: Set up a cloud database (e.g., Firebase, MySQL) to store call data, message templates, and analytics.
4) API Integration: Use REST or SOAP APIs to connect with CRM systems, telephony systems, and SMS providers.
5) SMS Service Provider: Integrate with services like Twilio or Nexmo for SMS delivery.
6) Security Protocols: Implement SSL/TLS for secure data transmission and access controls for data privacy.

B. Functional Requirements

1) Automated Message Triggering: The system should automatically send a personalized message right after a call disconnects.
2) Message Personalization: Enable dynamic message customization based on the inquiry type
3) Template Management: Admissions staff should be able to create and update message templates for different inquiries.
4) User Authentication and Access Control: Only authorized staff should access the system, with role-based controls.
5) Call Data Integration: The system must connect with the telephony system to get call data, like caller ID and disconnection timing, to trigger messages.
6) CRM Integration: Connect with the CRM to access prospect information, ensuring messages are relevant to their past interactions.

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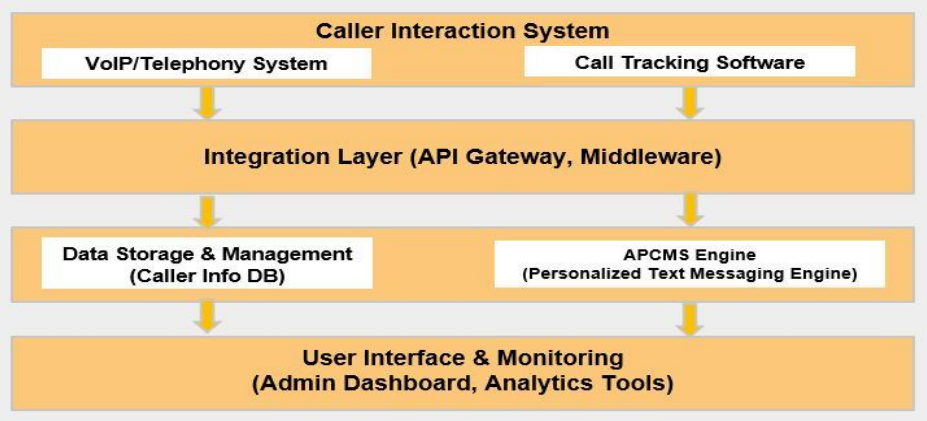
IV. SYSTEM DESIGN

A. Proposed System Architecture

The APCMS architecture includes an Android app for admissions staff, a backend server, a database, and links to both a CRM and an SMS provider. The Android app allows staff to manage calls, select inquiry types, and trigger follow-up messages.

After a call ends, the app communicates with the backend server to obtain a personalized message template based on the inquiry type chosen. The server facilitates connections with the CRM system to access prospect details, which further personalizes the message content. The server then sends the selected message to the SMS provider for delivery, while also storing message details and call logs in the database for future analysis. The analytics module keeps track of user engagement with the follow-up messages, offering insights that can help admissions teams improve communication strategies and enhance the experiences of prospective students.

This setup ensures a smooth, automated process that boosts the efficiency and quality of follow-up interactions.



V. ADVANTAGES, LIMITATIONS, APPLICATIONS

A. Advantages

1) Timely Engagement: Sends follow-up messages immediately after a call, ensuring prompt communication.
2) Improved Conversion Rates: Personalized information leads to a higher likelihood of converting inquiries into applications.
3) Reduced Manual Effort: Automates routine follow-ups, allowing staff to focus on more critical tasks.
4) Consistency and Accuracy: Ensures accurate information delivery, reducing misinformation risks.

B. Limitations

1) Initial Setup Complexity: Integrating with existing systems can be time-consuming.
2) Reliance on Accurate Data: Needs updated prospect data for messages to be relevant.
3) Limited Personal Interaction: Automated messages may not feel as personal as direct conversations.
4) Dependence on SMS Providers: The system's reliability depends on third-party SMS services.
5) Scalability Constraints: High inquiry volumes during peak times could challenge performance.

C. Applications

1) College and University Admissions: Streamlines follow-ups for inquiries, enhancing efficiency and engagement.
2) Customer Service in Educational Institutions: Useful in responding to inquiries about programs and services.
3) Corporate Client Engagement: Applicable in corporate settings for timely follow-up after client inquiries.
4) Healthcare Appointments: Can be adapted for healthcare to provide follow-up information post-appointment.
5) Government and Nonprofit Services: Ideal for delivering timely information after inquiries.

VI. CONCLUSIONS

The Automated Post-Call Text Messaging System(APCMS) is a precious tool for perfecting communication in council admissions by automating follow- up dispatches. It helps close the gap between original contact and farther engagement, addressing a crucial challenge for institutions that strive to maintain timely communication with prospective scholars. As the number of inquiries about programs and aid rises, it's vital to insure responsive and particular communication to encourage interest.

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A significant advantage of APCMS is its robotization, which reduces the need for admissions staff to manually shoot follow- up dispatches, cutting down crimes and saving time. This lets the platoon concentrate on more complex tasks rather of routine dispatches. also, APCMS ensures that prospective scholars admit accurate, up- to- date information which can be a vital factor in a competitive terrain.

APCMS also offers precious data perceptivity by tracking criteria like communication delivery and response rates. This helps admissions brigades estimate and ameliorate their communication strategies allowing for quick adaptations grounded on factual stoner .

In summary, APCMS is an important advancement in automating follow- up communication in council admissions. By delivering timely, individualized information, it tackles common challenges in maintaining engagement and boosting conversion rates. While careful integration and compliance are necessary, the advantages time savings, enhanced data perceptivity, and bettered stoner experience overweigh the challenges. As educational institutions contemporize their communication, APCMS presents a dependable, scalable result that meets the demand for responsive relations.

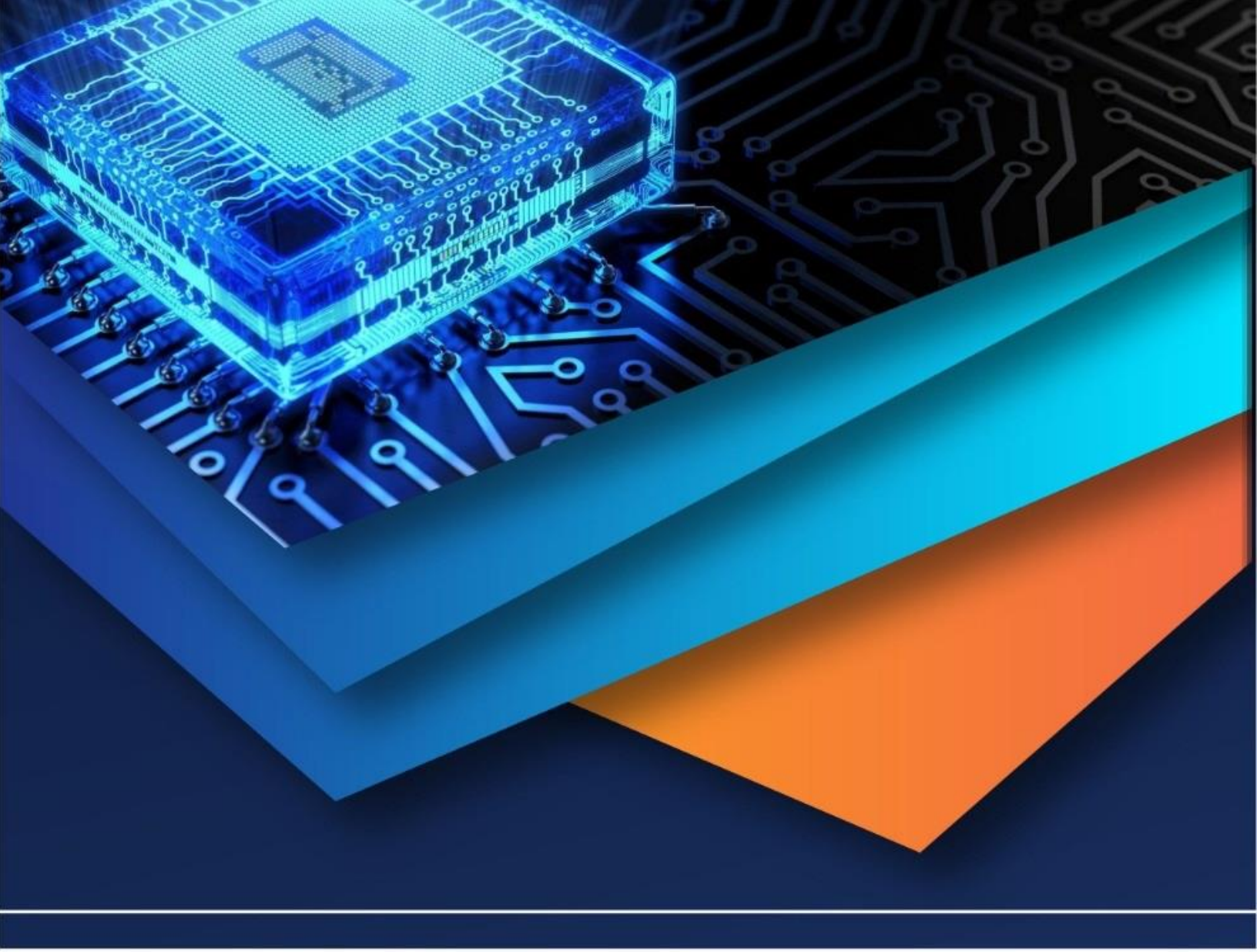
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