iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 12 **Issue:** IV **Month of publication:** April 2024

DOI: https://doi.org/10.22214/ijraset.2024.60259

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue IV Apr 2024- Available at www.ijraset.com

Growsight: A Comprehensive CRM and Business Insight Platform for Enhanced Decision Making

Atharva Meshram[1], Jay Telgote[2], Shubham Murar[3], Sanyam Kotwal[4], Tamanna Prajapati[5], Dr. Sudhir N Shelke[6], Prof. Jagruti Ghatole[7]
Computer Science and Engineering, Guru Nanak Institute of Technology, Nagpur, India

Abstract: ***In the contemporary business environment, the fusion of Customer Relationship Management (CRM) and advanced Business Insights is vital for informed decision-making. This paper presents GrowSight, a cutting-edge CRM and Business Insights platform tailored for sales teams, marketers, CEOs, analysts, and freelancers. Leveraging the Flutter framework in Android Studio and the DhiWise plugin for intuitive UI design, GrowSight ensures a seamless user experience.***

Key to GrowSight's functionality is its integration of Firebase Google login, providing secure user onboarding. Each user receives a unique Global User ID (GUID) for data integrity. GrowSight supports CSV data maintenance and storage in Salesforce via REST APIs, enabling Business Insights with uploaded CSV files.

Beyond standard CRM functions, GrowSight employs machine learning models for recommendation systems, churn prediction, and segmentation. It offers Location Analytics, Geographic Insights, and Regional Analysis, with diverse visualization options including Charts, Graphs, and 3D Visualizations. Customizable dashboards empower users to tailor analytical views.

Advanced features include outlier handling, data preprocessing, and an Applicant Tracking System (ATS). GrowSight facilitates customer segmentation and robust reporting, enhancing strategic decision-making. Additional features like bulk mailing and language-agnostic data interaction enrich user engagement.

GrowSight extends its functionality with advanced features such as sentiment analysis, sentiment-based recommendations, and sentiment-driven marketing campaigns.

By analyzing customer interactions across various channels, including social media, emails, and support tickets, GrowSight provides valuable insights into customer sentiments and preferences.

Moreover, GrowSight incorporates Natural Language Processing (NLP) capabilities to analyze unstructured data such as customer reviews, feedback forms, and survey responses. This allows businesses to extract actionable insights from textual data, identify emerging trends, and address customer concerns proactively. Overall, GrowSight empowers businesses to leverage the power of CRM and advanced business insights to drive growth, enhance customer satisfaction, and stay ahead of the competition in today's dynamic business landscape.

Keywords: Customer Relationship Management (CRM), Business Insights, Flutter framework, Android Studio, DhiWise plugin, UI design, Firebase Google login, Global User ID (GUID), CSV data maintenance, Salesforce integration, REST APIs, Machine learning models, Recommendation systems, Churn prediction, Customer segmentation, Location Analytics, Geographic Insights, Regional Analysis, Data visualization (Charts, Graphs, 3D Visualizations), Customizable dashboards, Outlier handling, Data preprocessing, Applicant Tracking System (ATS), Robust reporting, Bulk mailing, Language-agnostic data interaction, Sentiment analysis, Natural Language Processing (NLP), Real-time data streaming, Security features (Data encryption, GDPR, HIPAA), Third-party analytics integration, Role-based access control.

I. INTRODUCTION

In today's fast-paced business environment, organizations are constantly seeking innovative tools to streamline customer interactions and leverage data-driven insights for informed decision-making. However, the existing landscape of CRM solutions often falls short of integrating advanced business analytics seamlessly, creating a gap between data collection and actionable insights.

This gap poses a significant challenge for sales teams, marketing departments, CEOs, and data analysts, who require holistic platforms to navigate the complexities of customer relations and market dynamics.

Recognizing this challenge, GrowSight emerges as a comprehensive solution poised to bridge the divide between CRM functionality and sophisticated business insights.

©IJRASET: All Rights are Reserved

At its core, GrowSight seeks to empower users across various roles, including sales teams, marketing teams, CEOs, owners, data analysts, business analysts, and freelancers, with a unified platform that amalgamates data management, analytics, and actionable insights.

The prevailing problem lies in the fragmentation of tools and processes within organizations, where CRM systems operate independently from advanced analytics platforms, resulting in disjointed workflows and limited insights. This disconnect impedes the ability of businesses to extract meaningful value from their data, hindering strategic decision-making and stifling growth opportunities.

GrowSight aims to address this challenge by offering a seamless integration of CRM functionalities and advanced business insights, encapsulated within an intuitive and user-friendly interface. By harnessing the power of technologies such as Flutter framework, DhiWise plugin, Firebase Google login, and Salesforce integration, GrowSight endeavors to revolutionize how businesses interact with their customers and leverage data to drive actionable outcomes.

The primary objective of this research is to elucidate the technical architecture, features, and functionalities of GrowSight, highlighting its capacity to transform disparate data streams into actionable insights.

Through an exploration of its machine learning capabilities, visualization tools, and advanced analytics, this paper endeavors to showcase the transformative potential of GrowSight in enhancing organizational agility, fostering customer-centricity, and enabling data-driven decision-making.

In essence, GrowSight represents a paradigm shift in how businesses conceptualize and operationalize CRM and business analytics, offering a holistic platform that empowers users to unlock the full potential of their data.

II. METHODOLOGY

The development and implementation of GrowSight involved a meticulous process aimed at ensuring seamless integration, robust functionality, and user-friendly interactions. Leveraging the Flutter framework within Android Studio provided a foundation for cross-platform compatibility, offering users a responsive and intuitive experience. The choice of the DhiWise plugin for UI design added a layer of sophistication, enhancing the visual appeal of the platform.

User authentication and onboarding were streamlined through the incorporation of Firebase Google login, prioritizing both security and user convenience. Each user was assigned a unique Global User ID (GUID) during registration, a critical element for data segregation and maintaining the integrity of user-specific information.

The core of GrowSight's functionality lies in the integration with Salesforce for secure and efficient data storage. The establishment of a connected app within Salesforce facilitated the acquisition of a customer ID, enabling the generation of access tokens. This process, crucial for secure data transactions, was achieved through REST APIs, utilizing both POST and GET methods for bi-directional communication between GrowSight and Salesforce.

The storage and retrieval of user data, encompassing CSV files, user contacts, accounts, and leads (collectively referred to as "connects"), were orchestrated through Salesforce's REST resources.

This mechanism allowed users to seamlessly upload their CSV files, overwriting and updating their data in real-time, reflecting the latest information in the Salesforce database.

GrowSight's foray into the realm of machine learning involved the integration of advanced models for recommendation systems, customer churn prediction, segmentation, and time series analysis. Python packages facilitated data visualization, offering diverse chart types, hierarchical visualizations, temporal visualizations, and 3D representations. Customizable dashboards, empowered by a drag-and-drop interface, enabled users to tailor their analytical views.

The advanced analytics capabilities of GrowSight, including the handling of outliers in data, data preprocessing, and the integration of an Applicant Tracking System (ATS), were meticulously implemented to augment the platform's utility. Customer segmentation, a critical aspect of strategic decision-making, was seamlessly facilitated, offering segmentation analysis, client categorization, and customer clusters.

To enhance user engagement features such as bulk mailing facilities, curated news, updates, and articles were integrated directly into the user's homepage.

The "Talk to Data" feature, designed to facilitate interaction with data using plain language, aimed to democratize analytics and make it accessible to users across varying technical proficiencies.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

III. RESULT

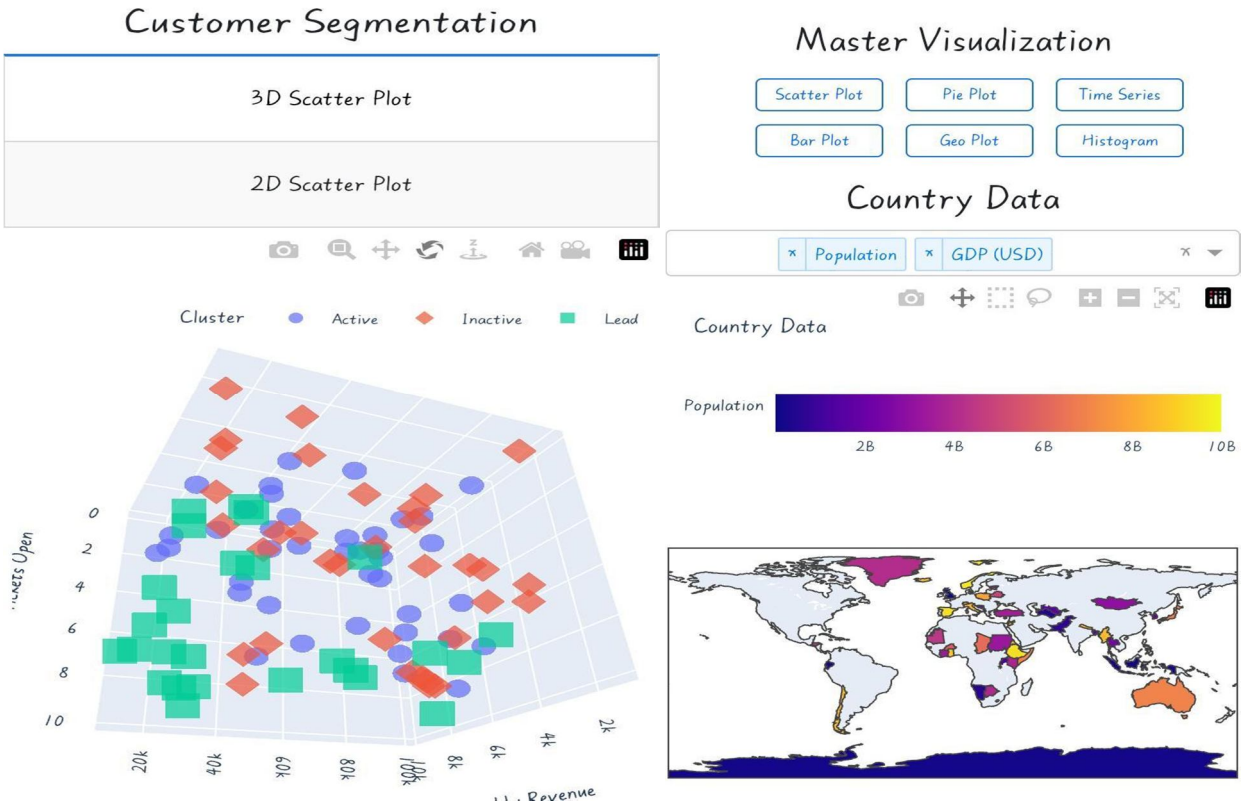


Fig. 1

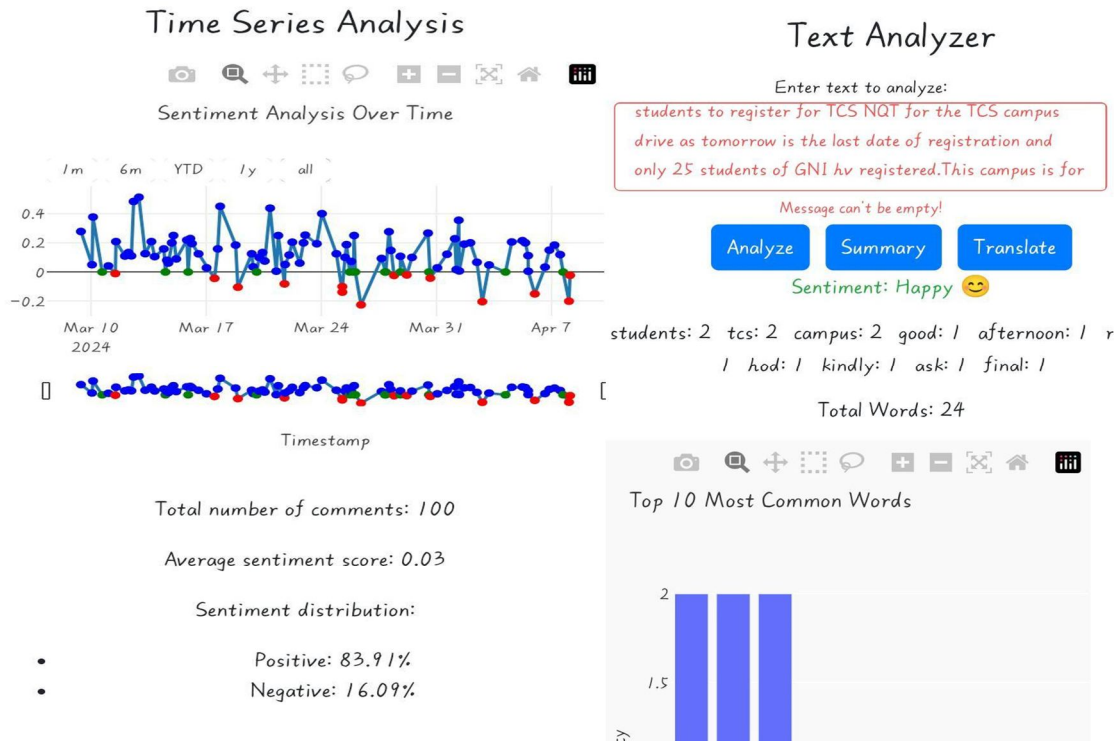


Fig. 2

IV. DISCUSSIONS

In examining the capabilities of GrowSight, a comprehensive CRM and Business Insights platform, we delve into the nuanced integration of technology and customer relationship management. This platform emerges as a sophisticated tool designed to meet the multifaceted needs of sales teams, marketers, CEOs, analysts, and freelancers alike. By leveraging the innovative Flutter framework within the Android Studio environment, complemented by the DhiWise plugin, GrowSight offers an intuitive and efficient user interface design. This aspect is crucial, as a seamless user experience is often the linchpin of effective CRM software.

A notable feature of GrowSight is its use of Firebase for Google login, which not only simplifies the user onboarding process but also fortifies security measures by assigning a unique Global User ID (GUID) to each user. This ensures both data integrity and privacy, addressing two of the most pressing concerns in today's digital landscape.

GrowSight's approach to data maintenance and storage, particularly its compatibility with CSV files and Salesforce through REST APIs, signifies a leap towards versatile and robust data management practices. Such flexibility is essential for businesses that rely on varied data sources for comprehensive Business Insights.

The platform's prowess extends to employing machine learning models for critical functions such as recommendation systems, churn prediction, and customer segmentation. These features represent the cutting edge of CRM capabilities, offering predictive insights that can significantly enhance strategic decision-making processes. Moreover, the inclusion of advanced analytics, including Location Analytics, Geographic Insights, and Regional Analysis, equipped with a wide range of visualization options, underscores GrowSight's commitment to providing deep and actionable business intelligence.

V. CONCLUSION

In conclusion, GrowSight emerges as a transformative force in the realm of Customer Relationship Management (CRM) and Business Insights, offering a unified platform that seamlessly integrates advanced analytics with traditional CRM functionalities. The comprehensive methodology employed in its development underscores its commitment to addressing the prevailing challenges faced by organizations in leveraging data for strategic decision-making.

The integration of the Flutter framework, DhiWise plugin, Firebase Google login, and Salesforce for data storage establishes GrowSight as a technologically advanced and versatile solution. The unique Global User IDs (GUIDs) ensure data segregation, while the efficient use of REST APIs facilitates secure communication between GrowSight and Salesforce, enabling users to interact seamlessly with their data.

GrowSight's foray into machine learning, data visualization, and advanced analytics positions it as a multifaceted tool for organizations seeking predictive insights and actionable intelligence. The diverse fields in Business Insights, coupled with an array of visualization types and customizable dashboards, empower users to derive meaningful and contextually relevant insights from their data.

The platform's ability to handle outliers, facilitate data preprocessing, and integrate an Applicant Tracking System (ATS) adds a layer of sophistication. Customer segmentation, a critical component of strategic decision- making, is seamlessly woven into GrowSight's capabilities, offering users nuanced insights into their customer base.

The engagement-focused features, including bulk mailing facilities, news updates, and a "Talk to Data" feature, underscore GrowSight's commitment to enhancing the user experience. By democratizing analytics and making it accessible to users with varying technical proficiencies, GrowSight positions itself as an inclusive and user-centric solution.

As organizations navigate the complexities of modern business, GrowSight stands poised to redefine how they interact with customers, interpret data, and make informed decisions. This research sheds light on the intricate details of GrowSight's architecture, functionalities, and innovations, providing a foundation for further exploration and discussion within the evolving landscape of CRM and Business Insights. With its transformative potential, GrowSight represents not just a platform but a catalyst for a new era of data-driven innovation and customer-centric business practices.

VI. ACKNOWLEDGEMENT

The development and realization of GrowSight as an innovative CRM and Business Insights platform have been made possible through the collaboration, dedication, and support of various individuals and organizations. In expressing our gratitude, we extend our heartfelt acknowledgments to those who have contributed significantly to the conception and execution of this project.

Firstly, we extend our appreciation to the entire development team for their relentless efforts and commitment. Their technical expertise, creativity, and collaborative spirit have been instrumental in bringing GrowSight from conceptualization to a fully functional and impactful platform. Each team member's unique contribution has enriched the project, ensuring its success.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

We would like to express our gratitude to the open-source community for providing a robust foundation of tools, frameworks, and libraries that have been integral to the development of GrowSight. The collaborative ethos of the open-source community has fostered an environment of shared knowledge and innovation, contributing to the evolution of technology.

The guidance and mentorship provided by Harsh Mehta, Salesforce Developer, at Cloobees, played a pivotal role in shaping the direction of our research and development. Their insights, feedback, and wealth of experience have been invaluable in navigating challenges and refining the vision of GrowSight.

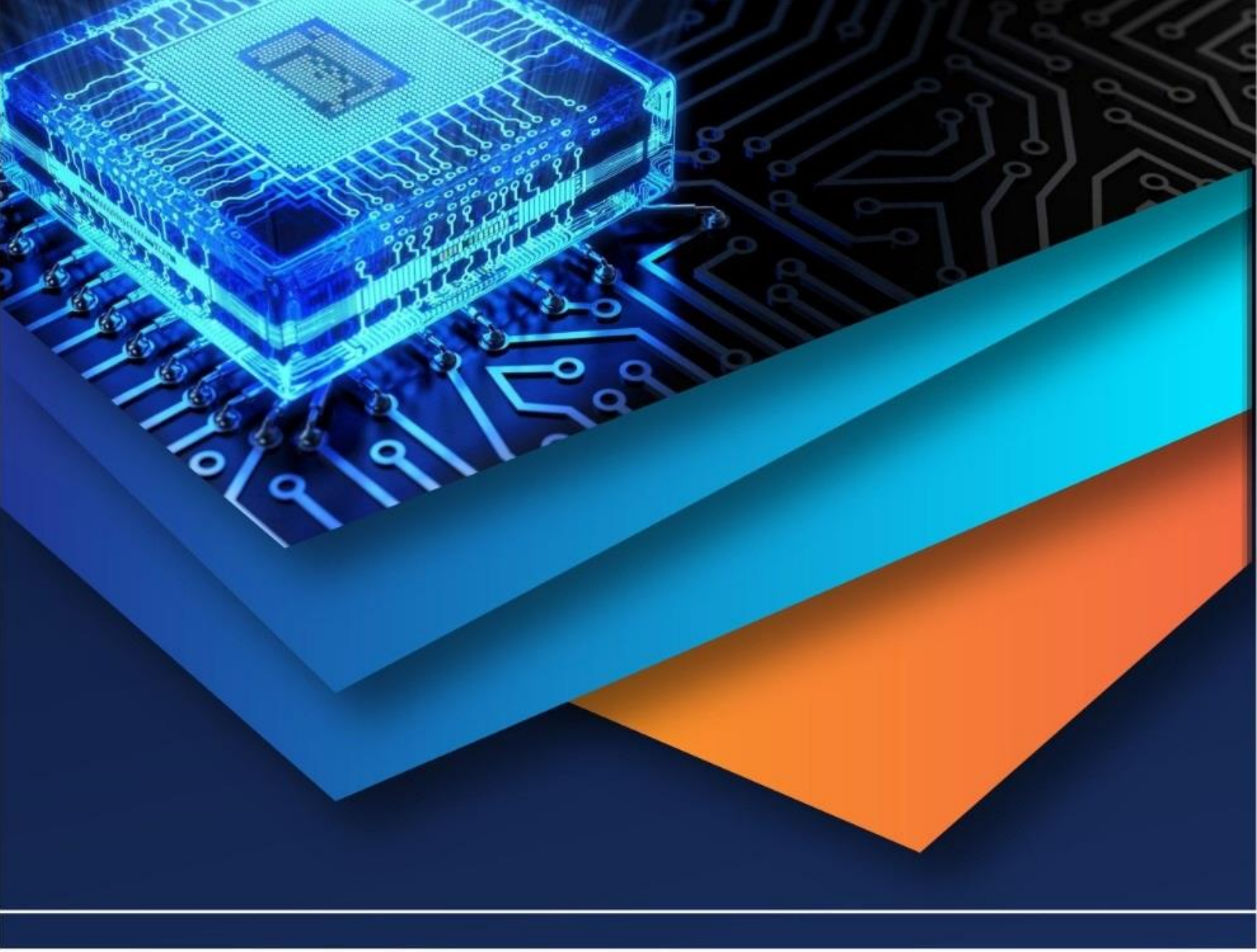
Our gratitude extends to Dr. Sudhir N. Shelke Principal GNIT, Prof. Jagruti Ghatole Department of CSE H.O.D.
and GNIT College for providing the necessary resources, infrastructure, and support throughout the development process. Their commitment to fostering innovation and research has created an environment conducive to the realization of ambitious projects such as GrowSight.

Finally, we acknowledge the broader community of researchers, developers, and industry professionals whose work and contributions have paved the way for advancements in CRM, business analytics, and technology at large. The collective knowledge and shared experiences within this community have inspired and informed the development of GrowSight.

REFERENCES

[1] Flutter Documentation. (https://flutter.dev/docs)
[2] Flutter GitHub Repository. (https://github.com/flutter/flutter)
[3] DhiWise Plugin Documentation or related technical documentation.
[4] Firebase Authentication Documentation. (https://firebase.google.com/docs/auth)
[5] Salesforce REST API documentation. (https://developer.salesforce.com/docs/atlas.en-us.api_rest.meta/api_rest/)
[6] Scikit-learn Documentation. (https://scikit-learn.org/stable/documentation.html)
[7] TensorFlow Documentation. (https://www.tensorflow.org/guide)
[8] Matplotlib Documentation. (https://matplotlib.org/stable/contents.html)
[9] Plotly Documentation. (https://plotly.com/python/)
[10] Pandas Documentation. (https://pandas.pydata.org/pandas-docs/stable/)
[11] NumPy Documentation. (https://numpy.org/doc/stable/)

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)