International Research Journal on Advanced Engineering and Management
https://goldncloudpublications.com
https://doi.org/10.47392/IRJAEM.2025.0134
e ISSN: 2584-2854
Volume: 03
Issue:03 March 2025
Page No: 831-836

Persona: Revolutionizing Conversations with AI Automation

E. Duraimurugan[1], S. Kesava Sundara Nathan[2], V. Vishnuvardhan[3]
[1,2,3]UG Scholar, Department of Artificial Intelligence and Data Science, SRM Valliammai Engineering College, Kattankulathur, Tamil Nadu, India.
Email ID: *duraimurugan1401@gmail.com[1], kesavasundaranathan884@gmail.com[2], vishnuvardhan8279@gmail.com[3]*

Abstract
Implementing adaptive learning mechanisms improves the accuracy of the detection process by continuously refining its capabilities based on real-time user feedback. A website is designed to focus on interactive pathways, bot management, easy UI, and support. This approach ensures that the system evolves, learning from past interactions to deliver more accurate and reliable results. By efficiently managing bulk calls for regular feedback collection, an AI-powered call automation bot significantly reduces the burden on human operators. This automation minimizes manual intervention, ensuring consistency, reliability, and scalability in gathering valuable insights, allowing businesses to focus on more critical tasks. To enhance user interactions and provide a more personalized and engaging experience, the system utilizes advanced conversational AI algorithms. Robotic Process Automation (RPA) is seamlessly integrated into the feedback process, making it more efficient and responsive to user needs. Additionally, AI-driven feedback collection enables companies to manage large volumes of feedback effortlessly and provides real-time analysis for better decision-making. The system uses natural language processing and AI-driven analytics to understand and interpret feedback contextually. Ultimately, through continuous learning, maximizing engagement, and fostering operational excellence, AI and RPA are revolutionizing feedback automation.
Keywords: *AI-powered automation; Automated Feedback Management; Conversational AI; Intelligent Response System; Robotic Process Automation (RPA).*

1. Introduction
The rapid advancement of digital technologies has led to intelligent automation solutions that enhance user interactions, streamline workflows, and boost operational efficiency across various industries. To focus on interactive pathways, bot management, easy UI, and support, a website is designed. By integrating an AI-powered call automation bot using Bland AI, organizations can reduce manual tasks and ensure a seamless, error-free user experience. This automation-driven approach guarantees consistency, scalability, and reliability, while also improving data accuracy through a sophisticated feedback analysis model that processes and interprets large volumes of data in real-time. The scalable architecture of these automated systems is specifically designed to accommodate enterprise-level operations, making them highly adaptable and capable of handling large volumes of interactions without compromising efficiency. Companies can seamlessly integrate these AI-driven solutions into their existing systems, ensuring accurate, flexible, and timely feedback collection. By reducing inconsistencies, accelerating response times, and delivering higher-quality services to end customers, AI automation provides businesses with a competitive advantage. Beyond enhancing operational efficiency, automating call handling and feedback management ensures that users experience personalized and responsive communication. Early adoption of AI automation will allow companies to leverage intelligent, self-improving systems that enhance user engagement, boost productivity, and foster continuous innovation. The future of automation lies in the synergy of conversational AI, adaptive AI. [1]

2. Related Works
The integration of AI and machine learning into feedback systems has significantly advanced the automation and optimization of how feedback is

International Research Journal on Advanced Engineering and Management
https://goldncloudpublications.com
https://doi.org/10.47392/IRJAEM.2025.0134
e ISSN: 2584-2854
Volume: 03
Issue:03 March 2025
Page No: 831-836

collected and processed. Numerous studies have shown that AI techniques can improve feedback management practices. For instance, Chen et al. (2024) emphasized the importance of natural language processing (NLP) in enhancing the accuracy and efficiency of feedback in their comprehensive analysis of intelligent feedback analysis systems, such as GPT, which are increasingly utilized to interpret user sentiment and extract valuable insights from feedback data. In parallel, Gupta et al. (2023) explored real-time intelligent feedback systems, highlighting how sophisticated algorithms can swiftly adapt to human input. Their research underscores the importance of processing data in real time. Additionally, studies like those by Fernandez et al. (2023) have focused on voice-based feedback systems, particularly the role of automatic speech recognition (ASR) in gathering and analyzing spoken data. Their findings illustrate how NLP and ASR technologies can work together to enhance user accessibility and expedite the feedback process. Despite recent progress, the field still struggles with the challenge of developing integrated systems that can effectively handle and evaluate various feedback inputs. It is essential to create platforms that smoothly integrate, audio, and other feedback types using the latest AI technologies to enhance feedback accuracy and operational efficiency. Thus, this study aims to tackle these challenges and improve feedback [2]

3. System Architecture

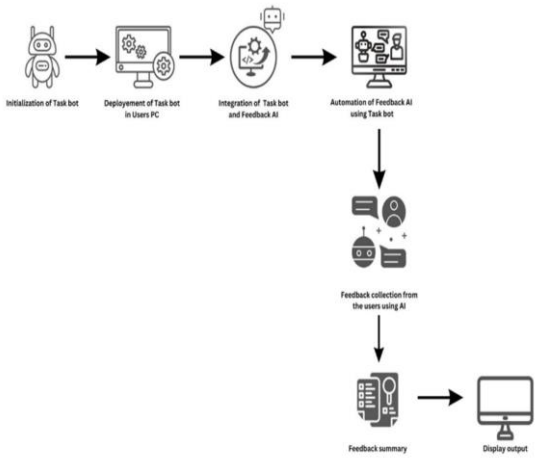

Figure 1 System Architecture

3.1. Initialization of Task Bot

The task bot is an automated software application designed to perform repetitive tasks without human intervention, and it is set up at the beginning of the process. This bot is programmed with specific instructions to handle data collection, send notifications, and gather responses, among other tasks related to feedback. Additionally, security settings are incorporated during this initialization phase to ensure the bot operates safely within the system. This stage is vital as it lays the groundwork for the bot's automated functions and defines its role in the feedback collection process.

3.2. Deployment of Task Bot in User's PC

The Task Bot is installed on the user's computer or a server and is ready to run once it has been successfully set up. The deployment process includes installing the bot software, configuring access permissions, and ensuring that it connects with other systems such as databases, cloud storage, and APIs. During deployment, the bot's compatibility with the user's system is assessed to ensure it can perform tasks efficiently without causing disruptions. For added flexibility, the Task Bot can be set to operate on predefined [3]

3.3. Integration of Task Bot and Feedback AI

After deployment, Feedback AI, a framework designed to manage and process user feedback will be integrated with the Task Bot. This integration enables real-time analysis, automated feedback collection, and classification of responses, ensuring smooth data transfer between the bot and the AI. The integration process includes establishing data-sharing protocols, which ensures that the AI receives feedback data in an organized manner. To effectively understand and interpret user comments, Feedback AI can also leverage machine

3.4. Automation of Feedback AI using Task Bot

The automation process kicks off once the integration is complete, with the Task Bot overseeing multiple Feedback AI tasks to eliminate the need for manual input. The bot can automatically solicit feedback from individuals through web forms, chatbots, voice interactions, or emails, ensuring that responses are collected in a consistent and organized manner. To

International Research Journal on Advanced Engineering and Management
https://goldncloudpublications.com
https://doi.org/10.47392/IRJAEM.2025.0134
e ISSN: 2584-2854
Volume: 03
Issue:03 March 2025
Page No: 831-836

enhance the accuracy of the responses, the bot ensures that feedback is collected at the right time, such as after a customer support interaction, a product purchase, or a service experience. [4]

3.5. Feedback Collection from Users Using AI

Feedback AI now engages with users through advanced conversational interfaces to gather their responses. The system can comprehend open-ended replies, suggest structured questions, and categorize input based on intent and sentiment. The AI processes these responses in real time, identifying key elements like feature requests, customer complaints, and both positive and negative feedback. By utilizing AI-driven feedback collection, businesses can obtain more contextually rich and insightful comments compared to traditional feedback forms. Additionally, AI can enhance the experience by personalizing interactions based on user history, making the process more engaging and relevant.

3.6. Feedback Summary

The report analyses the information and highlights the key findings. Feedback is organized by the AI into categories such as complaints, feature requests, usability issues, and overall satisfaction with the product. This report enables organizations to assess overall user satisfaction, identify areas for improvement, and recognize main points. In addition to qualitative insights like commonly used phrases in user responses, the report may also present quantitative data, such as the ratio of positive to negative feedback. With the AI-driven feedback summary, organizations can make data-informed decisions more quickly.

3.7. Display Output

Stakeholders can easily assess the analyzed comments. The findings can be sent to the relevant teams automatically, presented as a visual report, or displayed on a dashboard. With real-time access to insights, organizations can respond swiftly to significant comments. Decision-makers can leverage this data, based on actual user feedback, to enhance services, elevate customer experiences, and refine products. Additionally, AI-generated reports can be shared with other departments for collaborative efforts or exported to various business intelligence tools for more in-depth analysis.

4. Methodology Used

4.1. Bland AI

The core framework for facilitating dynamic and intelligent conversations is the Bland AI integration module. This module is designed to create structured response patterns that ensure smooth, context-aware interactions and enhance user engagement. By automating repetitive chat exchanges, reducing the need for manual input, and improving response accuracy, the robotic process automation (RPA) integration within this module further optimizes operations. The system can handle large volumes of feedback in real-time while maintaining consistent responses, thanks to automation. This seamless integration of AI-driven dialogue management, real-time automation, and ongoing learning significantly enhances the overall feedback processing experience,

4.2. RPA and Bland AI Integration Module

The goal of the RPA and Bland AI integration module is to enhance feedback management by creating a seamless collaboration between automated processes and AI-driven decision-making. This module eliminates manual login procedures, selects optimal engagement pathways, and initiates calls without requiring human intervention by combining robotic process automation (RPA) with Bland AI. Additionally, RPA optimizes interactions based on past user engagement, allowing for continuous learning and making feedback analysis more flexible and dynamic. By enabling real-time issue resolution, automated feedback classification, and personalized responses, the synergy of AI and RPA streamlines [5]

4.3. Bulk Call Management and Scalability Module

Robotic process automation (RPA) is utilized by the Bulk Call Management and Scalability Module to efficiently handle large volumes of calls and ensure smooth, uninterrupted operations. This module significantly reduces the need for manual intervention by automating bulk call processing, allowing businesses to manage high interaction volumes with ease. By optimizing workflow execution, it ensures that every call is addressed accurately and on time. To prevent system overload and ensure effective resource distribution, it intelligently routes calls based on priority, urgency,

International Research Journal on Advanced Engineering and Management
https://goldncloudpublications.com
https://doi.org/10.47392/IRJAEM.2025.0134
e ISSN: 2584-2854
Volume: 03
Issue:03 March 2025
Page No: 831-836

or set criteria. By leveraging AI-driven insights, it continuously enhances call management strategies and interactions. Ultimately, this module simplifies the handling of mass calls, boosts customer satisfaction, and allows companies to expand their operations [6]

Results and Discussion

Evaluating the Feedback AI system's compatibility with existing feedback management technologies and practices is crucial for its smooth integration into organizational structures. This includes looking at how the system interacts with various online platforms and data sources used to gather and process user feedback. Continuous improvement based on the results of these evaluations will enhance the system's performance. Future enhancements might include advanced AI features like predictive analytics and personalized feedback suggestions, along with interactive elements that boost user engagement. Comparing the Feedback AI system with similar products on the market User and industry expert feedback will be collected to provide valuable insights into how the system impacts feedback management and identify potential areas for future improvements. A well-rounded strategy includes continuous enhancements in the Feedback AI system. This system is designed to scale for enterprise-level operations, automating real-time feedback collection, enhancing user interactions through robotic process automation (RPA) and conversational AI, and efficiently managing large volumes of calls for routine feedback gathering. By employing advanced summary modeling and intelligent process automation, the solution reduces operational workload and streamlines call handling. The integration of RPA and conversational AI ensures a seamless user experience. With the support of Bland AI, the feedback bot can respond to customer inquiries in real time, offering context-aware responses and fostering greater user engagement over time. Automation Anywhere's RPA allows the system to learn from past interactions, enhancing response accuracy and paving the way for large-scale operations. allowing businesses to manage high interaction databases, cloud storage, and APIs (Figure 2) (Figure 3) (Figure 4) (Figure 5)

Figure 2 Persona Website Creation

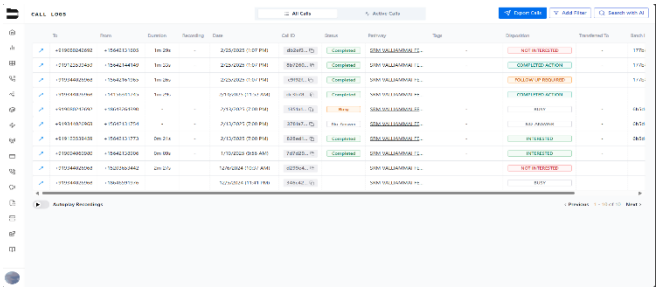

Figure 3 Bland AI Dashboard

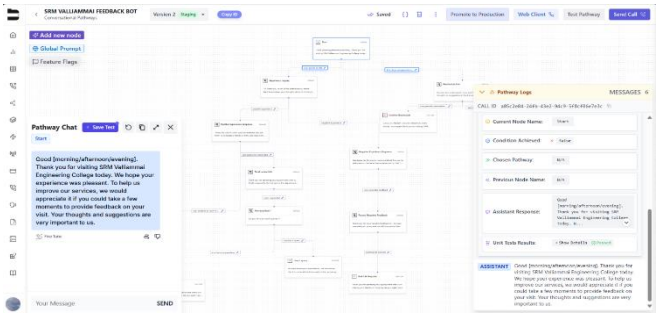

Figure 4 Call Flow

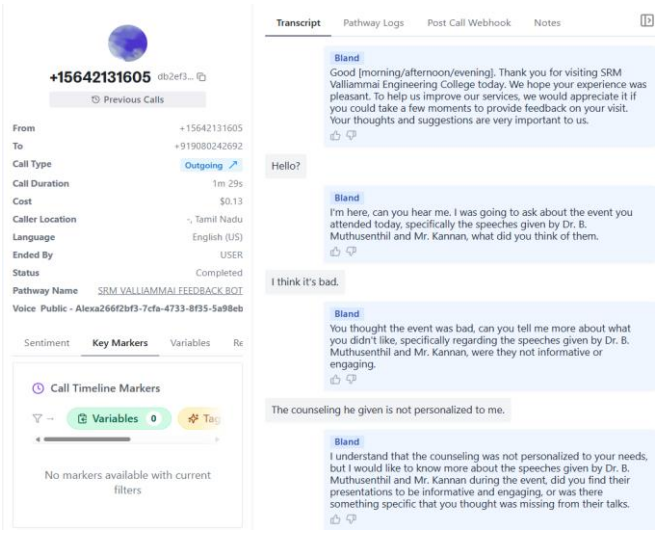

Figure 5 Live Test Case

International Research Journal on Advanced Engineering and Management
https://goldncloudpublications.com
https://doi.org/10.47392/IRJAEM.2025.0134
e ISSN: 2584-2854
Volume: 03
Issue:03 March 2025
Page No: 831-836

Conclusion

Customer feedback tactics are undergoing a significant transformation thanks to AI-driven solutions that automate and optimize the entire process, ensuring accuracy, efficiency, and seamless interactions. By combining Robotic Process Automation (RPA) with AI-powered automation, businesses can streamline the feedback collection process, reducing manual effort while maintaining precision. The bot's ability to operate in multiple languages enhances accessibility, allowing companies to gather insights from a broader range of audiences. This multilingual capability not only promotes inclusivity but also enables businesses to cater to clients from diverse geographical and linguistic backgrounds, thereby enhancing global reach and engagement. The system continuously improves its feedback analysis through ongoing learning, adapting to evolving user needs, and boosting customer satisfaction by providing more valuable insights. Real-time insights generated by advanced AI-driven feedback analysis equip companies with actionable information to enhance user experiences, proactively resolve consumer issues, and refine their services. By integrating autonomous decision-making capabilities, AI and RPA can work together seamlessly, reducing the need for human involvement while enhancing operational efficiency. AI-powered cognitive RPA ensures that feedback mechanisms are responsive, adaptable, and capable of handling complex inquiries accurately. The collaboration between AI and RPA, through automating responses, improving feedback accuracy, and enabling faster issue resolution, paves the way for a next-generation AI-RPA partnership that transforms customer engagement. This intelligent automation platform is ideal for large enterprises aiming to enhance customer interaction and increase overall productivity. The system's ability to process vast amounts of feedback in real-time ensures that businesses remain customer-centric, agile, and responsive in an increasingly competitive market. As AI and RPA technologies evolve, intelligent automation is redefining consumer engagement, empowering companies to leverage data-driven insights, improve decision-making, and maintain a competitive advantage in a rapidly changing technological landscape.

References

[1]. C. Martinez-Araneda, M. Gutiérrez, D. Maldonado, P. Gómez, A. Segura, and C. Vidal-Castro, “DESIGNING A CHATBOT TO SUPPORT PROBLEM-SOLVING IN A PROGRAMMING COURSE,” Mar. 2024, pp. 966–975. doi: 10.21125/inted.2024.0317.

[2]. S. Meshram, N. Naik, M. VR, T. More, and S. Kharche, “Conversational AI: Chatbots,” in 2021 International Conference on Intelligent Technologies (CONIT), IEEE, Jun. 2021, pp. 1–6. doi: 10.1109/CONIT51480.2021.9498508.

[3]. C.-C. Lin, A. Y. Q. Huang, and S. J. H. Yang, “A Review of AI-Driven Conversational Chatbots Implementation Methodologies and Challenges (1999–2022),” Sustainability, vol. 15, no. 5, p. 4012, Feb. 2023, doi: 10.3390/su15054012.

[4]. A. N. Vaidyam, H. Wisniewski, J. D. Halamka, M. S. Kashavan, and J. B. Torous, “Chatbots and Conversational Agents in Mental Health: A Review of the Psychiatric Landscape,” The Canadian Journal of Psychiatry, vol. 64, no. 7, pp. 456–464, Jul. 2019, doi: 10.1177/0706743719828977.

[5]. N. Kerimbayev, K. Adamova, V. Jotsov, R. Shadiev, Z. Umirzakova, and A. Nurymova, “Organization of Feedback in the Intelligent Learning Systems,” in 2024 IEEE 12th International Conference on Intelligent Systems (IS), IEEE, Aug. 2024, pp. 1–7. doi: 10.1109/IS61756.2024.10705178.

[6]. A. Rapp, L. Curti, and A. Boldi, “The human side of human-chatbot interaction: A systematic literature review of ten years of research on text-based chatbots,” Int J Hum Comput Stud, vol. 151, p. 102630, Jul. 2021, doi: 10.1016/j.ijhcs.2021.102630.

[7]. Y.-C. Wang, O. H. Chi, H. Saito, and Y. (Darcy) Lu, “Conversational AI chatbots as counselors for hospitality employees,” *Int J Hosp Manag*, vol. 122, p. 103861, Sep. 2024, doi: 10.1016/j.ijhm.2024.103861.

International Research Journal on Advanced Engineering and Management
https://goldncloudpublications.com
https://doi.org/10.47392/IRJAEM.2025.0134
e ISSN: 2584-2854
Volume: 03
Issue:03 March 2025
Page No: 831-836

[8]. Kerimbayev, K. Adamova, V. Jotsov, R. Shadiev, Z. Umirzakova, and A. Nurymova, "Organization of Feedback in the Intelligent Learning Systems," in 2024 IEEE 12th International Conference on Intelligent Systems (IS), IEEE, Aug. 2024, pp. 1–7. doi: 10.1109/IS61756.2024.10705178.

[9]. A. Rapp, L. Curti, and A. Boldi, "The human side of human-chatbot interaction: A systematic literature review of ten years of research on text-based chatbots," Int J Hum Comput Stud, vol. 151, p. 102630, Jul. 2021, doi: 10.1016/j.ijhcs.2021.102630.

[10]. P. Khandelwal et al., "BWIBots: A platform for bridging the gap between AI and human–robot interaction research," Int J Rob Res, vol. 36, no. 5–7, pp. 635–659, Jun. 2017, doi: 10.1177/0278364916688949.

[11]. N. Bhardwaj, S. Karthik. H, Anand. D, and Rahul. M, "AI Chatbot for Smart Communities: Enhancing User Interaction in Educational Institutions," in 2024 IEEE 6th PhD Colloquium on Emerging Domain Innovation and Technology for Society (PhD EDITS), IEEE, Nov. 2024, pp. 1–2. doi: 10.1109/PhDEDITS64207.2024.10838692.

[12]. Mageira, D. Pittou, A. Papasalouros, K. Kotis, P. Zangogianni, and A. Daradoumis, "Educational AI Chatbots for Content and Language Integrated Learning," Applied Sciences, vol. 12, no. 7, p. 3239, Mar. 2022, doi: 10.3390/app12073239.