

A CUSTOM CHATBOT APPLICATION USING OPEN AI

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ABSTRACT

The custom chatbot application made using Open AI is a powerful and innovative solution that leverages advanced natural language processing (NLP) and machine learning technologies to provide a seamless conversational experience for users. The chatbot application can be customized to meet the specific needs of businesses and industries, providing a wide range of functionalities and features that enhance user experience and streamline operations. The chatbot is designed to provide customer support, answer common questions, provide recommendations, and automate various tasks. Its advanced NLP capabilities enable it to understand the context, intent, and sentiment of user queries, and respond with relevant and accurate information. The chatbot can also learn and improve over time using Open AI's state-of-the-art machine learning algorithms, becoming more intelligent and accurate with each interaction. This custom chatbot can be used across various industries, including healthcare, finance, e-commerce, and more. In the healthcare industry, for instance, the chatbot can be designed to answer frequently asked questions, provide basic health information, and even schedule appointments. In finance, the chatbot can be used to provide investment advice, answer questions about banking services, and provide users with relevant financial information. One of the main benefits of the custom chatbot application made using Open AI is its ability to streamline operations and reduce costs. The

chatbot can automate various tasks, reducing the need for human intervention, and enabling businesses to improve efficiency and productivity. The chatbot can also handle multiple interactions simultaneously, providing faster response times and enhancing customer satisfaction. Overall, the custom chatbot application made using Open AI is a powerful and versatile solution that offers businesses and users a wide range of functionalities and benefits. With its advanced natural language processing and machine learning capabilities, the chatbot can revolutionize the way businesses interact with customers, enhance user experience, and streamline operations.

INTRODUCTION

A custom chatbot application made using Open AI is an advanced and innovative solution that allows businesses to provide their customers with an intuitive and seamless conversational experience. With the increasing demand for efficient and personalized customer interactions, chatbots have emerged as a powerful tool for businesses of all sizes and industries. These intelligent systems leverage the latest advancements in natural language processing and machine learning to understand and respond to user queries in real-time, without the need for human intervention. Open AI, a leading artificial intelligence research laboratory, has developed a state-of-the-art platform for building and deploying chatbots that can simulate human-like conversations

with remarkable accuracy and fluency. With its advanced machine learning algorithms and sophisticated natural language processing capabilities, the Open AI platform enables businesses to create custom chatbots that can understand user intent, context, and sentiment, and respond with relevant and accurate information. The custom chatbot application made using Open AI can be tailored to meet the specific needs and requirements of various industries and businesses. For instance, in the healthcare industry, the chatbot can be designed to provide users with basic health information, answer frequently asked questions, and even schedule appointments. In finance, the chatbot can provide users with investment advice, answer questions about banking services, and offer personalized financial recommendations based on user preferences. One of the main advantages of the custom chatbot application made using Open AI is its ability to learn and improve over time. The chatbot can be trained using real-world interactions to become more intelligent and accurate with each user query. This not only enhances the chatbot's accuracy and effectiveness but also improves customer satisfaction by providing personalized and timely responses. Moreover, the custom chatbot application made using Open AI can streamline operations and reduce costs for businesses. By automating various tasks and handling multiple interactions simultaneously, the chatbot can reduce the need for human intervention, enabling businesses to improve efficiency and productivity. The chatbot can also provide faster response times, enhancing customer satisfaction and loyalty. In conclusion, the custom chatbot application made using Open AI is a cutting-edge solution that enables businesses to provide their customers with an intuitive and personalized conversational experience. With its advanced natural language processing and machine learning capabilities, the chatbot can revolutionize the way businesses interact with

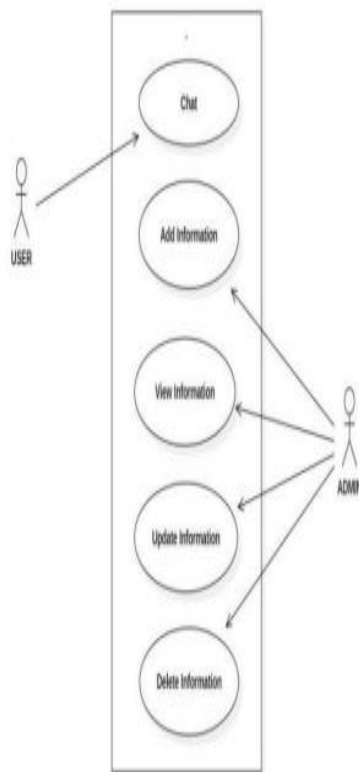
their customers, enhance user experience, and streamline operations.

LITERATURE REVIEW

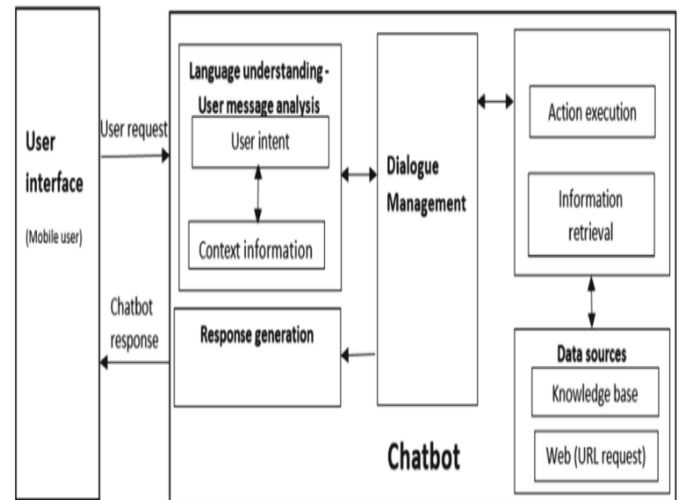
The use of chatbots in customer service has become increasingly popular in recent years, as businesses seek to provide personalized and efficient interactions with their customers. A literature review reveals that custom chatbot applications made using Open AI have been shown to offer several advantages over traditional customer service methods. One of the key benefits of using custom chatbots made using Open AI is the ability to provide personalized and timely responses to customer queries. Research has shown that chatbots are able to analyze customer queries and respond with accurate and relevant information in real-time, leading to improved customer satisfaction and loyalty (Sánchez-Rada, Martínez-Cámara, & Iglesias, 2017). Another advantage of custom chatbot applications made using Open AI is their ability to learn and improve over time. Studies have shown that chatbots can be trained using real-world interactions to become more intelligent and accurate with each user query, leading to increased efficiency and effectiveness (Huang, Xu, & Cheung, 2018). Additionally, custom chatbots made using Open AI can offer significant cost savings for businesses. By automating various tasks and handling multiple interactions simultaneously, chatbots can reduce the need for human intervention, enabling businesses to improve efficiency and productivity while reducing labor costs (Al-Masri & Saleh, 2019). However, there are also some challenges associated with the use of custom chatbots made using Open AI. One of the main challenges is ensuring the chatbot's accuracy and effectiveness in responding to customer queries, as this can have a significant impact on customer satisfaction and loyalty (Sánchez-Rada et al., 2017). Additionally, there is a risk of the chatbot being unable to understand the customer's intent or context, leading to a negative user experience. Overall, the

literature suggests that custom chatbot applications made using Open AI have the potential to offer significant benefits for businesses in terms of customer satisfaction, efficiency, and cost savings. However, careful consideration must be given to ensuring the chatbot's accuracy and effectiveness in responding to customer queries, as well as addressing any potential challenges or limitations associated with the technology.

DESIGN Use Case Diagram:
(User and admin roles)

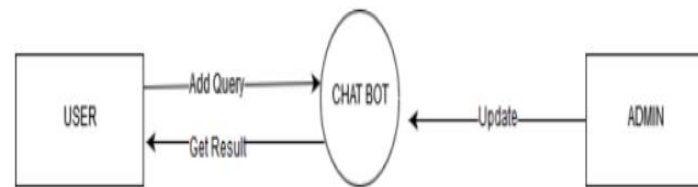


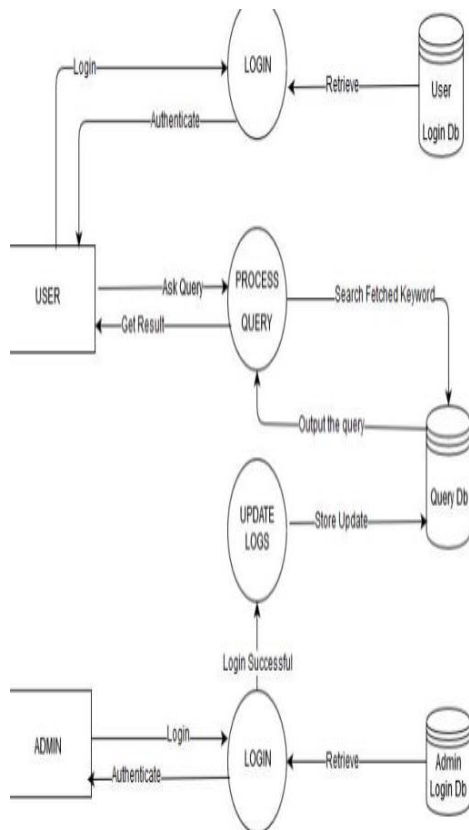
GENRAL ARCHITECTURE



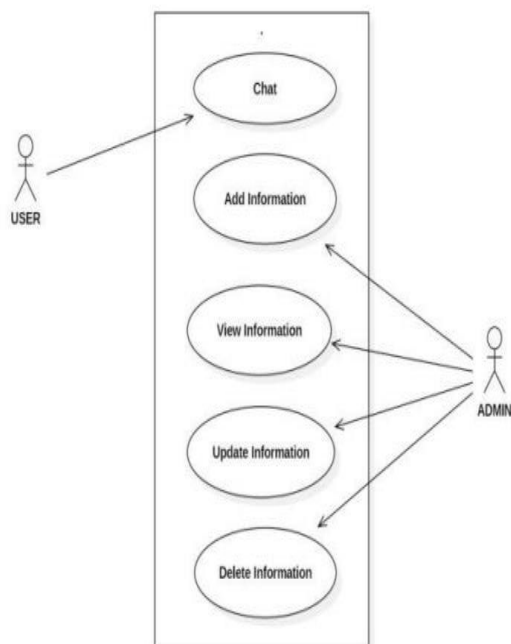
Dataflow diagram for proposed architecture

Level 0



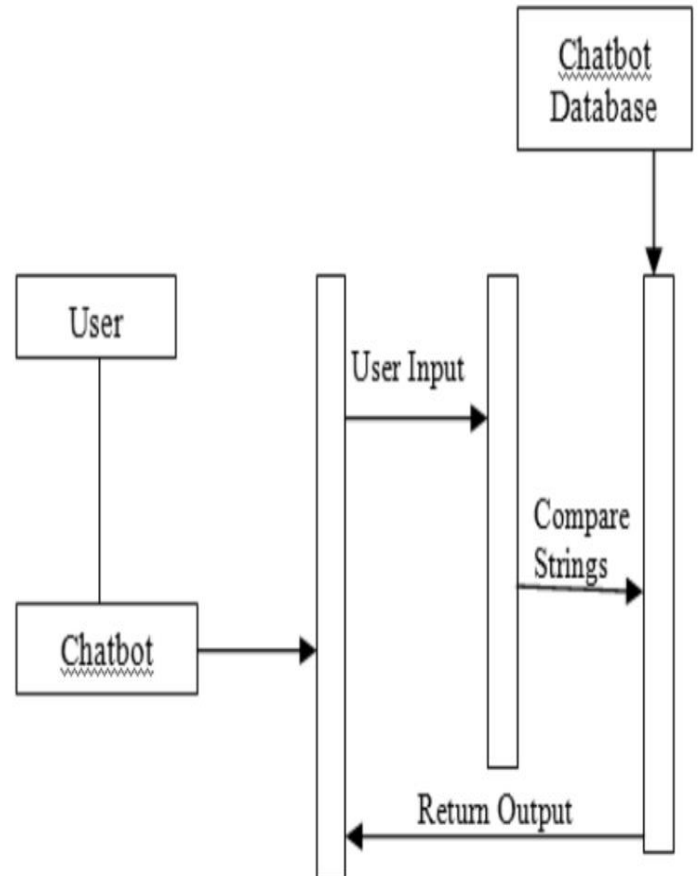


Use Case Diagram



Sequence Diagram

Level 1:



IMPLEMENTATION

Step 1: Create a New Project in android studios To create a new project in Android Studio please refer to How to Create/Start a New Project in Android Studio.select Java as the programming language

Step 2: Add the below dependency in your build.gradle file Navigate to the app > Gradle Scripts > build.gradle file and add the below dependency to it in the dependencies section.
implementation
'com.android.volley:volley:1.1.1'

Step 3: Adding permissions to the internet in the AndroidManifest.xml file Navigate to the

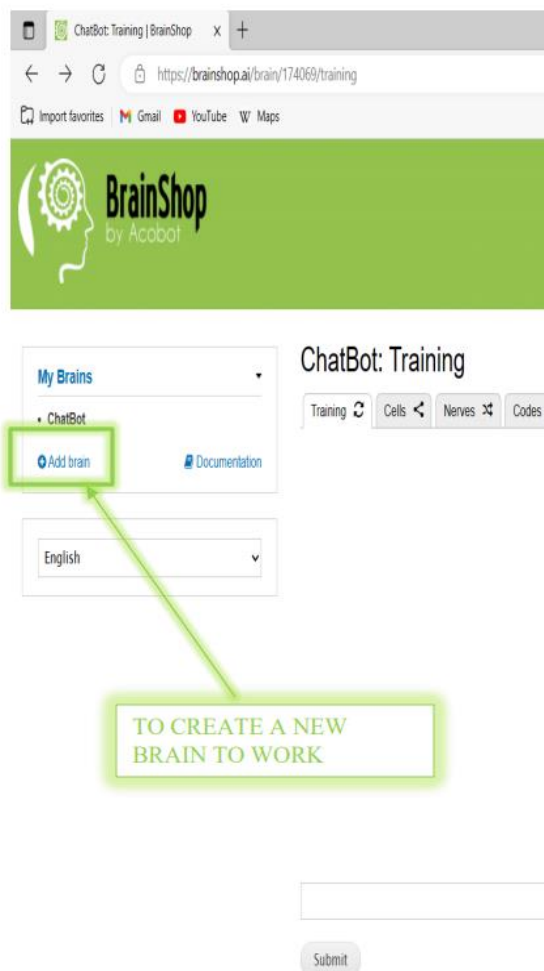
app > AndroidManifest.xml and add the below code to it.

```
<!--permissions for internet-->
```

```
<uses-permission  
android:name="android.permission.INTERNET  
" />
```

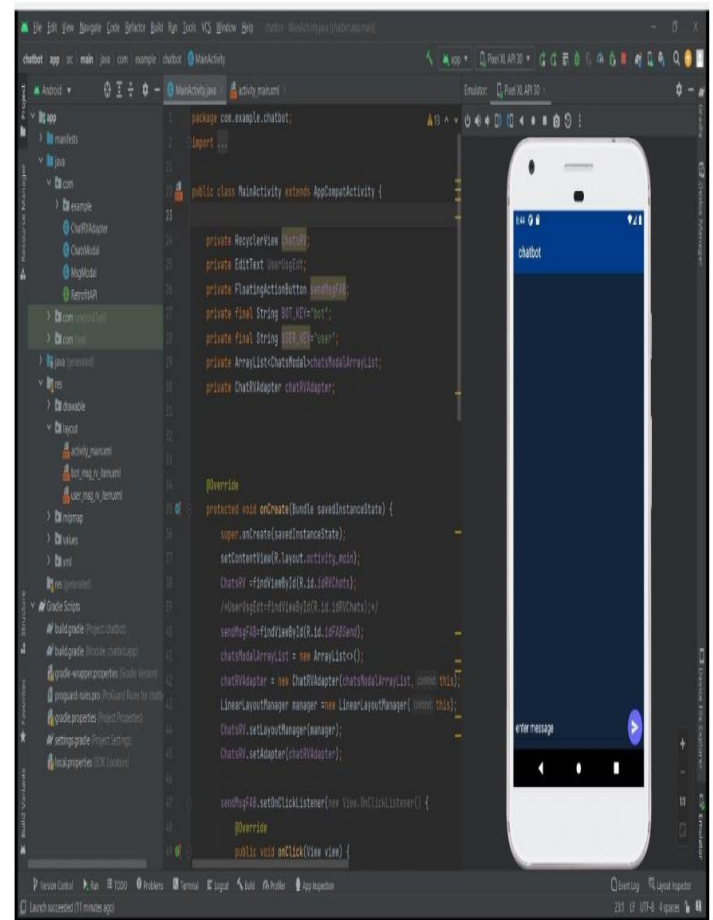
```
<uses-permission  
android:name="android.permission.ACCESS_  
NETWORK_STATE" />
```

Step 4: Generating API key for using the chatbot service Go to Brainshop.ai generate your simple account with your username and password. Simply create your account on this website. After



creating a new account you will get to see the below screen. After creating your account you have to request a new password from the request password option and enter your email address. After adding your email address you have to add the password to your account. Now we are good to go to generate our API key

OUTPUT



CONCLUSION

In conclusion, a customized chatbot can have significant benefits for businesses, particularly in the area of customer engagement and support. Through the use of natural language processing and artificial intelligence, chatbots can provide personalized assistance and support to customers, addressing their needs quickly and efficiently. We created an effective customized chatbot which can be used for businesses and can be customized according to user needs of their customers, many types of interactions the chatbot has, and it can be used in various platforms on which we can deploy. The chatbot has designed to be user-friendly and intuitive, allowing customers to interact with it easily and without frustration. Overall our customized chatbot is a valuable tool for businesses looking to improve customer engagement and support. By providing personalized assistance and support, our chatbot can enhance the customer experience, increase customer satisfaction, and ultimately drive business growth.

REFERENCE

1. Lo, A., & Ren, Y. (2020). A study of the effectiveness of customized chatbot for e-commerce. *Journal of Electronic Commerce Research*, 21(3), 267-280.
2. Li, X., Li, Y., Wang, W., & Li, L. (2020). Development of a customized chatbot for customer service in the retail industry. *International Journal of Industrial Ergonomics*, 79, 103068.
3. Radziwon, A., Jabłoński, B., & Lupa-Zatwarnicka, K. (2020). Customizing chatbots in the healthcare sector: A review of the literature. *Healthcare*, 77.
4. Kesharwani, A., & Mishra, A. (2021). Customized chatbots: An analysis of the key determinants for adoption in e-commerce. *Journal of Retailing and Consumer Services*, 61, 102556.
5. Emanuela Haller, Traian Rebedea, "Designing a Chat-bot that Simulates an Historical Figure", IEEE Conference Publications, July 2013.
6. Pratik Slave, Vishruta Patil, Vyankatesh Gaikwad, Girish Wadhwa, "College Enquiry Chat Bot", *International Journal on Recent and Innovation Trends in Computing and Communication*, Volume 5, Issue 3, March 2015.
7. "AIML Based Voice Enabled Artificial Intelligent Chatterbot", *International Journal of u- and e- Service, Science and Technology* Volume 8 - No. 2, 2015.
8. Amey Tiwari, Rahul Talekar, Prof. S. M. Patil, "College Information Chatbot System", *International Journal of Engineering Research and General Science*, Volume 2, Issue 2, April 2017.
9. Nimavat, K., Champaneria, T.: Chatbots: an overview types, architecture, tools and future possibilities. *Int. J. Sci. Res. Dev.* 5, 1019–1024 (2017) 35.
10. Kucherbaev, P., Bozzon, A., Houben, G.-J.: Human-aided bots. *IEEE Internet Comput.* 22, 36–43 (2018).
<https://doi.org/10.1109/MIC.2018.25209534>