Kommunicate Overview and Potential Application in Guardian Monitor

Samuel Mclean

Kommunicate is a tool that helps you set up a custom chatbot based on the GPT4 model. Ultimately, you are using OpenAI's GPT4 system, but it allows you to set up the chatbots to be run at scale and micromanage how they act without coding the systems from scratch.

Application in Guardian monitor:

Chatbots implemented into the Guardian monitor can allow users to have a more interactive experience. They can get moderately complex support on navigating the app and general advice without directly interacting with a human, saving on the effort required to run the service.

Detailed Feature Analysis:

Bot Features – Dialogflow:

- **Intent Recognition**: Quickly identify the writer's goals in their messages without in-depth prompting.
- **Entity Extraction**: This can Extract essential details (dates, numbers) from interactions, allowing the data to be used more easily in the future outside of the chatbot.
- **Multi-Language Support:** Chatbots can communicate in multiple languages and recognise and properly respond to users of many languages.
- **Backend interaction:** The chatbots can identify whether they need to make API or database calls and use the results to better interact with users.
- **Supports external voice and text interfaces:** It can function with voice interaction via Alexa, Siri, Google Assistant, etc.

Kommunicate Features:

- **Bot Customization:** We can customise the chatbot's appearance, including colours, icons, and welcome messages.
- **Rich Messaging:** Support for rich messages such as images, videos, buttons, quick replies, and carousels. This allows for better UI to help users navigate the Nutrihelp Site.
- **Bot-Human Handoff:** Kommunicate allows the bot to send a user a message that it has been chatting with a human to continue communicating upon seeing specific phrases or other triggers.
- **Conversation Routing:** Rules can be given that direct the chatbot to act/direct the chat if it sees specific phrases or inputs.
- **Fallback Handling:** If the bot is unable to properly help the user, the chatbot can take pre-prepared actions to forward the user to where they can adequately get help/do what they need.

- **Extensions of Entity Extraction:** This allows code to be executed easily based on extracted entities, which allows you to, for example, check inputs to validate user input, etc.
- **Persistent context:** The chatbot can remember previous conversations with the same users.
- **Analysis:** Data can be collected from users overall and compiled by communicating, allowing for general trends to be identified and worked with to improve the user experience.

## Summary of potentially useful features:

The Guardian chatbot utilises entity extraction to extract important information from user queries and provide personalised responses. It also boasts rich messaging capabilities, allowing users to communicate with the chatbot through various formats such as text, images, buttons, and quick replies. This enhances user experience and makes conversations more interactive and engaging.

The bot-human handoff is crucial for the seamless transition from chatbot to human support when needed. In healthcare contexts, it ensures appropriate care for complex or sensitive issues. Multi-language support and customisation options can improve the Guardian chatbot's functionality, catering to a diverse user base and aligning it with the project objectives and branding.
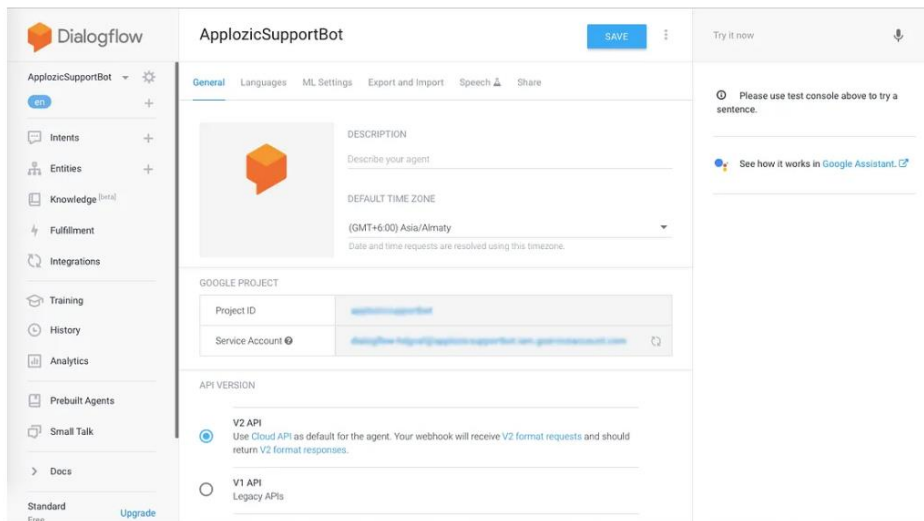
Integrating Dialogflow into Kommunicate:

I used a free trial to create this demo; from the dashboard, navigate to Bot integration. Due to not having made a dialogflow bot I used < https://medium.com/kommunicate/how-to-integrate-bot-using-dialogflow-in-kommunicate-1ac32911a7d0> as a source for some of the images.

STEP 1: Access Kommunicate and Navigate to Integration Tool
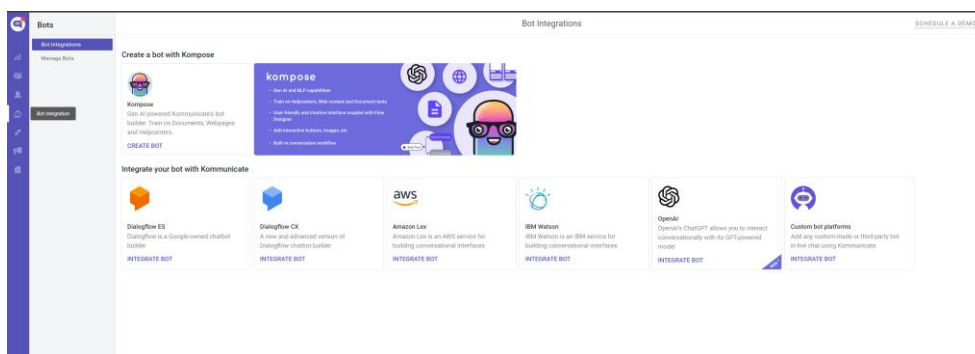
Once in this window you can select the tool based on what sort of dialogflow agent you are using.

STEP 2: Input Dialogflow Agent Information

Dialogflow info can be acquired from this page; it must then be inputted into Communicate. You must then access the Key for your agent and input that as well. Select proceed. This should have all the information needed for Kommunicate to access your Dialogflow Agent.

Access to your Dialogflow bot's key is detailed in this page under the 'get key' label.

Step 3: Human Handoff settings.
After setting up Dialogflow integration you can enable human handoff, once this is enabled you can set up triggers either via keywords or as custom buttons placed in the UI allowing for the user to ask for human assistance.

Bots

Bot Integrations

Manage Bots

< Go back to Bot Integrations

Editing your Dialogflow bot

✓ Integration info ··· ✓ Bot profile ··· 3 Human handoff

Automatic bot to human handoff:

abctest can handoff the conversation to a human team member when it is unable to recognize any user query. Once the handoff is done, the bot will stop replying.

Do you want to enable automatic bot to human handoff?

◉ Yes, enable this feature

○ Disable this feature

[Finish bot integration setup]

I am unable to see where to navigate to set up this in particular, due to not being able to properly access the system, but there is a page set out like this where you can easy add in keywords to trigger human handoff

Training phrases ?

Search training phra 🔍 ∧

❝ Add user expression

❝ human

❝ agent

❝ Support

❝ Human transfer

Custom Payload ? 🗑

```
1 {
2   "platform": "kommunicate",
3   "message": "Sure will do that. Please be online till I connect you to
    the next available agent.",
4   "metadata": {
5     "KM_ASSIGN_TO": ""
6   }
7 }
```

This allows you to run code that will then connect the chat to a person instead of the bo

Alternatives to Kommunicate which can integrate with Dialogflow

BotPress – The open Source Alternative:

- **Natural Language Understanding (NLU)**: Botpress offers advanced NLU capabilities, allowing the Guardian chatbot to accurately understand and process complex user queries.
- **Customizable Flows:** Create and customise conversation flows with a visual flow builder, enabling the chatbot to effectively guide users through structured interactions.
- **Rich Messaging**: Supports rich messaging formats such as images, videos, buttons, and quick replies, enhancing the user experience and making interactions more engaging.
- **Human Handoff**: Seamlessly transitions conversations from the chatbot to a human agent when necessary, ensuring that users receive appropriate support for complex or sensitive issues.
- **Extensibility:** Botpress's modular architecture allows for easy integration with external systems and services, enabling the chatbot to access and provide relevant health information.
- **Contextual Awareness**: The chatbot can maintain context across conversations, enabling personalised interactions based on the user's history and preferences.
- **Analytics and Reporting:** Gain insights into user interactions and chatbot performance, allowing for continuous improvement and optimisation of the chatbot.
- **Security and Privacy**: Botpress provides robust security features, ensuring that sensitive health data is protected and privacy regulations are complied with. Especially so if employed in a open source way.

Pros and Cons:

- Pros:
  - Open-Source: Botpress is open-source, providing more flexibility and customization options, which can be crucial for a healthcare application like Guardian.
  - Rich NLP Support: Integration with Dialogflow and other NLP services allows for more sophisticated conversational experiences.
  - Extensible: The platform's modular architecture allows for the addition of custom functionalities, which can be beneficial for specialized healthcare use cases.
  - On-Premise Deployment: For healthcare applications, data privacy is crucial. Botpress can be deployed on-premise, offering better control over patient data.
- Cons:
  - Learning Curve: The flexibility and customization options come with a steeper learning curve compared to Kommunicate.
  - Setup Time: Being a more complex platform, the initial setup and integration might take longer.

Summary

The Guardian chatbot, leveraging the open-source platform Botpress, offers unparalleled security and flexibility, essential for a healthcare application where data privacy and customization are paramount. As an open-source tool, Botpress allows for in-depth customization and integration with existing healthcare systems, ensuring that the chatbot can be tailored to meet the specific needs and regulations of the healthcare industry. However, this increased flexibility may result in longer development times than more streamlined platforms like Kommunicate.

Comparison between BotPress and Kommunicate.

While Kommunicate provides a more out-of-the-box solution with features like bot-human handoff and rich messaging, Botpress excels in its ability to offer advanced customization, security, and the potential for deeper integration with healthcare systems. The trade-off between the two platforms lies in the balance between ease of use and speed of deployment (Kommunicate) versus the need for a highly customized and secure solution (Botpress) for the Guardian project.

Tars:

- **User-Friendly Interface:** Tars offers a drag-and-drop chatbot builder, making it easy for users to create and customize chatbots without any coding knowledge.
- **Rich Messaging:** Supports various message types, including text, images, videos, buttons, and carousels, for interactive conversations.
- **Pre-Built Templates:** A wide range of industry-specific chatbot templates that can be customized to suit specific needs.
- **Integration Capabilities:** Allows for integration with third-party services and APIs, enabling functionalities like appointment scheduling, payment processing, and data retrieval.
- **Conversation Analytics:** Provides detailed analytics on chatbot interactions, helping users understand user behavior and optimize chatbot performance.
- **Multichannel Deployment:** Chatbots can be deployed on multiple platforms, including websites, WhatsApp, and Facebook Messenger, for a unified user experience.
- Automated Workflows: Enables the creation of automated workflows to streamline processes and improve efficiency.

Pros and Cons:

Pros:

- **Ease of Use:** Tars offers a user-friendly interface for creating and managing chatbots, which can speed up the development process.
- **Integration with Dialogflow:** Seamless integration with Dialogflow enables the handling of complex queries and natural language processing.
- Customizable Templates: Tars provides a range of templates that can be customized for healthcare scenarios, potentially saving development time.
- **Analytics:** The platform offers analytics tools that can provide insights into user interactions, which can be valuable for improving patient engagement.

Cons:

- **Limited Customization:** While Tars is user-friendly, it may offer less flexibility compared to Botpress or Kommunicate, particularly for specialized healthcare needs.
- Pricing: Depending on the scale of the Guardian project, Tars' pricing model may become a consideration, especially if many interactions are expected.

Tars Summary:

Tars is a chatbot platform for creating and deploying conversational chatbots without coding. It provides a user-friendly drag-and-drop interface, pre-built templates, rich messaging capabilities, and integration with third-party services. Tars also offers analytics tools to track chatbot performance, and chatbots can be deployed across multiple channels. Overall, Tars simplifies chatbot creation and management for businesses looking to enhance customer engagement and automate processes.

Final Thoughts:

Ultimately, the best tool for the job depends on the specific circumstances it is to be used in, but I feel bot press is a better solution than kommunicate or Tars, primarily due to its open-source nature, which makes it far more flexible and self-hostable, guaranteeing security and control. Self-hosting also provides many benefits, including free use and no legal issues with using proprietary software. BotPress can do anything Kommunicate can, but many things that Kommunicate has are not pre-set up in BotPress and require coding to make it functional. As such if minimal effort is wanted to set up Kommunicate is the better option. Tars are not as flexible, require a subscription and limit the custom application of its features; as such, I do not believe it is suitable for the guardian monitor.