

Chat Bots for Social Services: A New Way to Reach Constituents

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Abstract: Social agencies worldwide are critical in supporting needy populations. This support could be related to Income or Medicare. Social agencies need to guide citizens on what could be a road - to - recovery model for their respective needs. At present, there is a gap in providing such guidance to citizens. This paper covers the role of a Chat Bot-a Generative AI real - time assistant-that could provide satisfactory responses without hours of waiting on call or response to applications.

Keywords: Chatbot, Client Management, System Integration, Task Management, Health and Human Services, Social Agencies

1. Introduction

A chatbot is a program that receives input from the human user, analyzes the request based on the information available to the program, and responds in natural language. Modern chatbots use deep learning, natural language processing, and generative artificial intelligence.

The first chatbot program was written in the mid - 20th century, with the technology becoming more popular with OpenAI's ChatGPT. Now, there are many online chatbots available.

Chatbots are making their way into the public sector as well. Figure 1 shows just some examples of how chatbots are adding value for governments across the globe.

| Chatbot | Impact |
|-----------------------------------|---|
| <i>myPHX311</i> | The city of Phoenix created myPHX311, a web portal and app designed to answer common questions and put Phoenix's residents in contact with the agencies best positioned to resolve their issues. |
| <i>Citibot</i> | The City of Williamsburg implemented an integrated text - based system for citizen engagement in order to reduce staff workload. Residents can use Citibot to search for city information, ask questions, and report issues with city services. |
| <i>WhatsApp Chatbot</i> | Kolkata, India uses WhatsApp Chatbot for vaccination appointments and vital record requests |
| <i>Derby City Council Chatbot</i> | The Derby City, UK chatbot provided an immediate, easily accessible resource for smokers who needed extra support during the 28 - day challenge, 'Stoptober'. |
| <i>OneService Chatbot</i> | The Singapore OneService Chatbot routes resident feedback and requests on messaging services. OneService allows residents to report incidents of littering and illegal parking, using AI to interpret users' input and deliver relevant information to the proper agencies. |

Figure 1: Examples of Chatbots worldwide.

There are many places where chatbots are utilized in government sectors, exemplifying the opportunity to maximize the use of AI technology in the Human Services industry.

2. Challenge

Individuals requiring income and Medicare support would like to know more about how their government can help them in their hour of need. Generally, they will search the internet and be overwhelmed by the response, as it does not provide specific details about their individual situation. They then choose to call the local social agency, where they wait potentially long hours to get an answer. Sometimes, even after applying for a single program, one cannot visualize his path to recovery or back to work.

In such a situation, it can help if someone can guide them on various alternate paths, tailored to their circumstance. Currently, many social agencies need such assistance. Social benefits delivery is approached from an application perspective, i. e., the individual is evaluated based on the program he applied for. Some agencies are moving towards an integrated application approach, i. e., the program is selected based on the individual circumstance. This is a better approach than the single program application. An integrated application approach also sometimes takes months (30 - 45 days or more) for the client to know which program/s he is eligible for.

A generative AI chatbot can help provide a more efficient response during the initial phase. The chatbot can also support an existing client in the ongoing delivery of social benefits to provide further insight into his case processing.

3. How Chat Bots Can Help

a) Evaluate pre-eligibility

A chatbot can be trained with the relevant policy and assist the client by providing a high - level path forward based on the household submitted information.

For instance, when an individual provides basic information such as income, medical information, and household composition, a Chatbot referring to policy/rules across the program should be able to guide him and his family to the program they might be eligible for. The chatbot response will accordingly encourage him to submit the application for processing.

b) Real - time assistant

The integrated application submission is lengthy, often with nearly identical questions to cover the needs of all programs. It is challenging for clients to successfully apply for the complete package, which further delays processing on the caseworker side due to information requests. Sometimes, this may cause duplicate application submissions.

A real - time client assistant will help citizens better understand the question, answer it, and submit the complete package on the first attempt. It can further guide the client to review the application if there is a mismatch in the information submitted. (The employment start date is different from the income start date, the address submitted does not match the postal services record, etc.)

c) Provide insight into the household case.

Once the client receives the benefits, the chatbot can assist in submitting any change of circumstance, income reporting, and back - to - work programs.

For instance, chatbots can be trained to provide assistance to individuals facing benefit cliffs. (Benefit cliffs refer to the sudden and often unexpected decrease in public benefits that can occur with a small increase in earnings.) Chatbots enable citizens to evaluate their individual scenarios by building a customer map to coach them on which path to take based on the impact of earnings.

The aim of this support should be to encourage citizens to go back to work.

4. Conclusion

Generative AI's real - time assistance will help address the client's immediate questions and concerns. It will also help state agencies better serve their citizens with limited resources. One of the key benefits of Generative AI chatbots is self - learning and improvement based on human feedback. Unlike other technologies, which become redundant and need upgrades with the passage of time, chatbots have the ability to become smarter with time.

Chatbots bring a great deal of benefits, but some risks need to be accounted for.

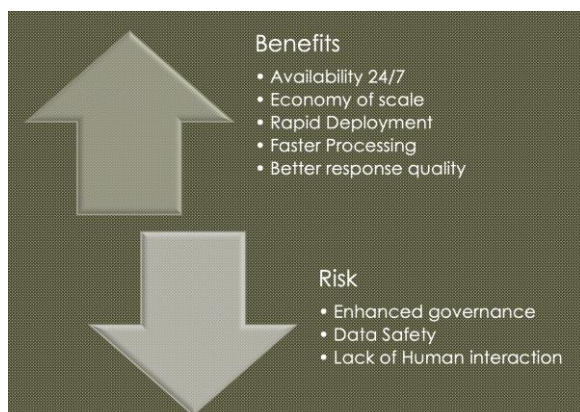


Figure 2: Chatbot Benefits and Risk

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