Enhancing customer engagement in insurance with persuasive chatbots
Abstract

Chatbots are becoming ubiquitous. The advancements in artificial intelligence (AI) and natural language processing (NLP) have given chatbots the capability to orchestrate human-like conversations with users. In the banking, financial services, and insurance (BFSI) industry, organizations are deploying chatbots as a comprehensive customer service channel. Consequently, chatbots are turning into representatives of BFSI firms for customer interactions in the digital self-service environment. The convenience of a chatbot answering inquiries or processing service requests in normal conversational language has the potential to outscore all other self-service options. We believe that this automated synthetic interaction tool can be leveraged to do more. Chatbots can be potentially designed to engage with customers during the decision-making phase to persuade them toward a positive task or dissuade them from negative actions. This white paper examines how persuasive chatbots can be designed and deployed by insurers and retirement plan providers (RPPs).

The need for persuasion through chatbots

In an increasingly digitalized landscape, chatbots have become an indispensable component for customer engagement and self-service in the insurance industry. However, chatbots are deployed by insurers and RPPs to perform a limited set of functions. Existing chatbots can answer inquiries and handle service requests (related to policy or scheme status, issue of statements, processing reinstatement quotes, or even submission of low-value claims). Of these, inquiries or requests for a quote for a new policy, reinstatement of a lapsed policy, enrolment in connected insurance schemes, or increasing contribution levels are seen as positive business events. Inquiries for free look cancellation, surrender of a policy, or withdrawal of money that could result in leakage, are considered negative business events. In a physical environment, the customer service executives of the insurer would interact with customers to understand their situation and either persuade or dissuade them.

The digital landscape does not permit in-the-moment intervention at all times. Hence, a chatbot can be designed to become a personal advisor and engage with the user to provide additional insights rather than merely responding to queries. However, chatbots have limited scope—while users can enquire about both positive and negative business events through a chatbot, they are mostly not allowed to process a negative transaction. Nevertheless, a user who enquires about a business function that is either positive or negative could be at any stage of the decision-making process. Chatbots designed using persuasive techniques are equipped with the capability to meaningfully engage with users during the decision-making process by offering relevant information, providing alternatives, weighing the evidence, and persuading them to choose the best option.1 Chatbots can

be designed to understand the context, have purpose-driven conversations, and nudge the user toward optimal financial behavior.

While the proliferation of generative-based mature bots will throw open more sophisticated and powerful ways for persuasion, its non-availability today need not be a limiting factor. Designing chatbot-driven persuasion could still be explored by leveraging hybrid chatbots that are a blend of rule-based and retrieval-based chatbots.

Getting down to brass tacks: Designing persuasive chatbots

Even before getting into designing a persuasive bot, the foremost point to be considered is that the chatbot should be able to handle the tasks performed by any average chatbot from the industry. Secondly, it should perform the tasks reasonably well. These hygiene features contribute to the authority or status of the chatbot, for it to persuade. The basic structure of all the customer conversations with insurers regarding a business process comprises three parts—action trigger, response, and result. An action trigger could be an inquiry or a service request. The response involves a counter query, appeal, seeking additional information, or processing a transaction. The result is a positive or negative closure of the action trigger. The conversation can vary based on the business event and the situation of the customer. To persuade a customer for or against an action, the chatbot should incorporate appropriate persuasion strategies that will form a part of the response. Depending on the business event and chat instance, persuasion could be either proactive or reactive. A proactive persuasion is chatbot-driven, where the chatbot initiates a persuasive conversation with the user as an extension of another conversation flow. On the other hand, reactive persuasion is user-driven and made in response to a user inquiry. Given the relative complexity associated with proactive persuasion, to begin with, let us examine how chatbots can be designed for reactive persuasion.

Designing a persuasive chatbot requires a step-by-step approach that considers several key aspects:

- Identify persuadable business events, evaluate the need and business justification for persuasion, and collate all the business rules and alternatives related to them.
- Define the persuasive strategy and conversation flow by enumerating the arguments relevant to a specific event, probable counterarguments from the user, and the pertinent persuasive appeals.
- Ensure the conversation flow comprises strategies and components to counter probable user intentions and logical or emotional arguments.
- Design the default conversation flow keeping in mind that there could be some degree of resistance from the user.
- Ensure the persuasive design is sensitive to the user context as choosing an inappropriate occasion or overdoing it could irritate the user and become counterproductive.
- Ensure the right mix of components in the persuasive strategy and render it unobtrusively.
Let’s contextualize this further by considering the example of a retirement plan participant. Jane, aged 53, plans to withdraw from her 401K retirement account. She initiates a conversation with a hybrid chatbot named Aida to place a service request. A withdrawal is a negative business event that will reduce the retirement fund and impact the long-term asset accumulation of the plan participant. Consequently, the chatbot must persuade Jane against the withdrawal. To persuade, the chatbot must be built with knowledge about the various types of withdrawals allowed, customer situations when persuasion is to be avoided, rules relating to withdrawal, penalties, and taxes, and other alternatives available. Figure 2 shows the possible components of persuasive strategy that Aida could adopt during the conversation with Jane.
Figure 3 shows the likely conversation flow between Jane and Aida along with the related annotations.

**Persuasive chat with Aida**

<table>
<thead>
<tr>
<th>Chat</th>
<th>Annotation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AIDA</strong> Hi Jane, I am Aida your retirement chatbot. How may I help you?</td>
<td>Non-strategy dialogue acts</td>
</tr>
<tr>
<td><strong>CORE FLOW</strong></td>
<td></td>
</tr>
<tr>
<td><strong>JANE</strong> Am looking to withdraw money from my 401k</td>
<td>Ask withdrawal info</td>
</tr>
<tr>
<td><strong>AIDA</strong> What is the reason for the withdrawal?</td>
<td>Inquiry: Withdrawal reason</td>
</tr>
<tr>
<td><strong>JANE</strong> I need money for my first house.</td>
<td>Provide info: Withdrawal reason</td>
</tr>
<tr>
<td><strong>AIDA</strong> Jane, buying a prime residence qualifies as a hardship withdrawal, but as your age is lesser than 59½, you will have to pay an early withdrawal penalty of 10%.</td>
<td>Provide info: Withdrawal and penalty</td>
</tr>
<tr>
<td><strong>AIDA</strong> How much do you want to withdraw?</td>
<td>Inquiry: Withdrawal amount</td>
</tr>
<tr>
<td><strong>JANE</strong> I want USD15,000.</td>
<td>Provide info: Withdrawal amount</td>
</tr>
<tr>
<td><strong>AIDA</strong> You are eligible to withdraw USD15,000</td>
<td>Provide info: Withdrawal amount</td>
</tr>
<tr>
<td><strong>JANE</strong> What is the procedure for that?</td>
<td>Inquiry: Withdrawal procedure</td>
</tr>
<tr>
<td><strong>AIDA</strong> Jane, before I proceed, do you want to know the net amount payable and the deductible tax?</td>
<td>Logical appeal: Taxation</td>
</tr>
<tr>
<td><strong>JANE</strong> Yes</td>
<td>Positive reaction</td>
</tr>
<tr>
<td><strong>AIDA</strong> Jane, before I proceed, do you want to know the net amount payable and the deductible tax?</td>
<td>Provide info: Taxation and penalty</td>
</tr>
<tr>
<td><strong>JANE</strong> Okay. I wish to proceed. Explain the procedure.</td>
<td>Negative reaction</td>
</tr>
<tr>
<td><strong>AIDA</strong> An early withdrawal penalty of 10% in addition to federal and state tax of 25% will be charged on the amount withdrawn. You will get a net amount of USD9,750</td>
<td>Additional information: Retirement corpus</td>
</tr>
<tr>
<td><strong>JANE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AIDA</strong> Jane, you may be aware that withdrawals affect the retirement planning. Do you want to know how this withdrawal may affect your retirement?</td>
<td>Provide info: Retirement corpus</td>
</tr>
<tr>
<td><strong>JANE</strong> Yes</td>
<td>Positive reaction</td>
</tr>
<tr>
<td><strong>AIDA</strong> When do you plan to retire?</td>
<td>Inquiry: Retirement age</td>
</tr>
<tr>
<td><strong>JANE</strong> When I turn 75</td>
<td>Provide info: Retirement age</td>
</tr>
</tbody>
</table>
### Persuasive chat with Aida

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| **AIDA** If the USD15,000 that you withdraw is left in the fund and grows at an inflation-adjusted rate of 6%, it will amount to USD54,053 by the time you retire. After retirement, this could fetch you an additional amount of USD3,989 per annum for 25 years.  
**JANE** Okay. I understand.  
Provide info: Projection of accumulation and future consumption shock  
**AIDA** In addition, after this withdrawal you can neither pay back the amount withdrawn nor make any new contribution for six months.  
**JANE** Ok, but I don’t have a choice.  
Provide info: Post-withdrawal conditions  
**AIDA** It is observed that people who are aged less than 55 years having a balance of less than USD150,000 and withdrawing about 10-15% of the money, had to make a lot of financial compromises in the way they live post-retirement.  
**JANE** No. I have exhausted the other options and am short of USD15,000, so I want to withdraw.  
Additional information: People like you  
Emotional appeal  
Negative reaction  
**AIDA** Jane, you can instead avail a loan of up to 50% of the vested balance subject to a maximum of USD50,000.  
You are eligible for a loan of USD7,936.  
**JANE** Oh. Thanks.  
Provide info: Loan  
**AIDA** Loans are repayable and hence not considered as early distributions.  
They are exempt from income tax and early withdrawal penalties  
Logical appeal  
Negative reaction  
**AIDA** Jane, please fill and submit the document attached below to process your request.  
Provide info: Withdrawal procedure  
**AIDA** If the documents are in order, the withdrawal amount will be credited to your bank account within seven days of receipt.  
**JANE** Okay. Thanks.  
Provide info: Withdrawal procedure

### Figure 3: Persuasive chat between Jane (customer) and Aida (chatbot)

A simple rule-based chatbot could have completed the above transaction sooner with fewer questions and answers. The interaction would have been considered successful if the session concluded without a single ‘Sorry, I didn’t understand’ message. In that case, undeniably a golden opportunity to engage with Jane during the decision-making process and try to steer her toward positive action would have been lost. The core objective of a persuasive chat is to sow a thought-seed at the right moment to influence customer decisions. However, it is unrealistic to expect a persuasive chatbot to successfully nudge all customers through soft persuasive skills toward a
different action, as this is a challenge even for human agents. In our example, Jane had pre-decided to withdraw because of other compulsions, and successfully resists all the persuasive arguments and alternatives suggested by the chatbot, and proceeds with the intended transaction. Still, it is noteworthy that the RPP leveraged an opportunity to engage with Jane while she benefited through timely access to relevant information on the negative consequences of withdrawal and the alternatives available, thus enabling an informed and rational decision. Despite failures, we believe that a persuasive conversation initiated by a chatbot has the potential to prompt customers to re-evaluate their decisions and accept the persuasive suggestion.

Realizing the benefits

As chatbots mature from being a nice-to-have discrete technology experiment to a must-have conversational channel, insurers will have to revisit their chatbot strategies. They must iteratively improvise and enhance the capability of their chatbots so that they are more in sync with the progress in conversational technologies. Failing to do so could potentially drive the feature-restricted, older-generation bots toward customer disuse. While revitalizing their chatbots, in addition to focusing on the newer technological capabilities and business functions, insurers need to seriously think about other conversational nuances such as adding persona characteristics to the bot and leveraging it for finer functions like persuasion and customer behavior-based conversation.

It can be argued that the strength of a chatbot to influence decisions is likely to be minimal or the causal association of a chatbot conversation with a successful persuasion is difficult to prove. However, the success of persuasion can be determined by performing analytics on chat histories and subsequent real-world transactions. The conversational capability of chatbots has the potential to effectively make customers rethink and re-assess their priorities and can result in customers either opting for the path suggested by the chatbot or choosing an alternative. In our view, insurers and RPPs must implement persuasive chatbots to strengthen their digital core, improve customer engagement, and gain a competitive edge over their peers.

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