VIEW POINT

CONVERSING WITH INTELLIGENCE

Abstract

Even as the BFSI industry begins to realise the benefits of conversational AI, this whitepaper presents a bird's eye view of the technology and its advantages when compared to conventional chatbots. The paper also presents a couple of potential use cases and traces out a growth path foreseeing AI-enabled conversations gaining increasing acceptance in the future.

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Why Conversational AI

Knowledge management and resource skilling in the BFSI industry are typically time-consuming and manual-intensive activities. However, this situation is on the verge of being disrupted by conversational artificial intelligence (AI) which has remarkable benefits to offer such as faster responses to resources, right resolutions for exceptions, and automated dashboards to provide the management views on resource skilling statuses.

A growing force across business

AI when applied to the field of conversations has had various approaches such as chatbots and voice support, which have been prevalent in the recent past. However, post-COVID statistics have shown an increased utilisation of AI across industries. With the rise ranging between 150% to 270%, chatbots and voice support are now indisputably of momentous worth. With predictive analysis, it can be derived that 85% of corporations have improved their utilisation of voice support using artificial intelligence, during the financial year 2021-22.

Though the increase in utilisation of conversational AI shows that the technology has been widely accepted by larger organisations, yet it still suffers from multiple gaps in its abilities. These gaps can be foreseen as a major stumbling block towards its being universally adopted by organisations. However, technical teams are being proactive in their response to such gaps and bringing in the necessary reinforcement libraries, thus helping larger organisations to take the necessary steps towards adopting AI-powered conversation bots in the future. Hence, it is likely that global market for conversational AI using chatbots and voice assistants will grow by 23.5% CAGR between 2023 – 2026.[1]

Conversational AI models, a birds-eye view

Conversational AI involves a blend of natural language processing (NLP) and machine learning driving predictable and inert methods of communication technologies, broadly known as chatbots. Such blending is typically applied to answer the questions of operators, in a manner that aims to replicate human style conversations. The older generation of chatbots were menu based, utilising a frequently asked questions (FAQ) database to answer queries. Unlike them, conversational AI uses NLP to examine and construe the meaning of human conversations, and machine learning to automatically imbibe new information towards enhancing future conversations.

These NLP technologies process unstructured human conversations and converts them into a structured output in such a manner that algorithms can then be applied to understand the data, make choices, and deliver appropriate responses. NLP has two subsets, natural language understanding (NLU) which understands the syntax and semantics of a conversation to determine the projected meaning, and natural language generation (NLG) which generates the processed output in human understandable language.

Use cases and benefits of conversational AI

Traditional chatbots are typically based on decision trees, scripts, or menus which limit them to answering only FAQs. However, the current use case of knowledge management and resource skilling requires conversational AI for broader solutions, wherein users can practically talk with chatbots or virtual agents. Such solutions use the large volumes of data stored in databases, machine learning techniques, and natural language processing to help imitate human interactions, recognise speech and text inputs and translate their meaning across various languages.

Services	Chatbot	Conversational AI
Online 24/7	✓	✓
Natural Language Understanding	Keyword-based approach	✓
Dynamic Navigation (Context related)	Button focused	✓
Multi Level intent Hierarchy	If/ Else statements	✓
Broad Scope	Narrow Scope	✓
3rd party integrating support	Limited understanding model	✓
Self Improving over time	X	✓
High- resolution rates	X	✓
User Authentication	X	✓
Voice and conversational IVR	X	✓
Multilingual	X	✓
Privacy and Security complaint	X	✓

Fig 1: Differences between traditional and conversational AI chatbots

[1]https://www2.deloitte.com/us/en/insights/focus/signals-for-strategists/the-future-of-conversational-ai.html

Use Case 1: Knowledge Management and Exception Handling

Typically, in BFSI operations, resources must read and understand the exceptions available in standard operating procedure (SOP) documents. In case, the exception has not been documented in the SOP, resources are then required to reach out to an analyst for additional help on resolving the exception. In case of these new scenarios, analysts must update the SOP manually. Further, the accuracy levels of new resources in handling these exceptions must be tracked manually by analysts.

While it is a time-consuming process for new resources to identify exceptions in SOP documents, it also increases the manual efforts of analyst in guiding new resources. The process increases the cycle time for resolving exceptions, affects SLAs, and thereby reduces accuracy as well as client satisfaction.

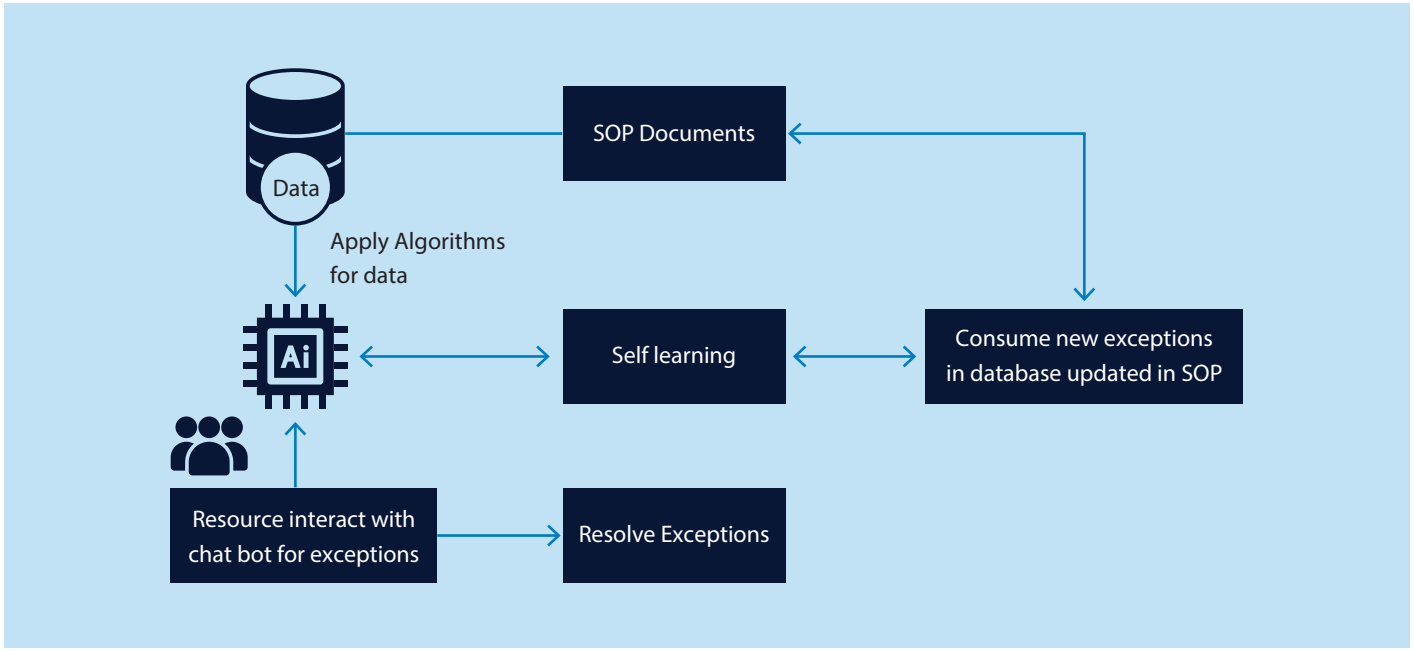

Fig 2: Conversation AI Knowledge Repository

With conversational AI, the AI engine interacts with the SOP document saved in the database and based on applied algorithms, keeps the database up to date on handling any new exceptions. Users can directly interact with the AI-driven chatbot to obtain necessary information on any exceptions from the SOP, as well as their respective resolution files or documents. The AI engine also act as a self-learning tool by upgrading its database whenever any new exceptions are added to the SOP.

The benefits of the conversational AI approach and the self-learning capability of the AI engine include greatly reduced manual effort and cycle times, as well as increased accuracy and domain knowledge of resources.

Use Case 2: Resource Skilling

Typically, resource skilling for BFSI operations involves a lot of intensive effort by analysts. They keep track of resource trainings in a training tracker and update it periodically, while also accrediting resources based on the training provided to them on various topics. They also must prepare skill metrics for the resources, assess the skills of each employee and check if re-training is required.

Further, the analysts map the resources to sessions on domain trainings for them to understand the business and cover up any gaps in understanding. Finally, they prepare resource skill tracking reports and publish dashboards to senior management. As improper training and assessment might lead to attrition from the team, they also prepare checklists for each process and share it with the team for process accuracy.

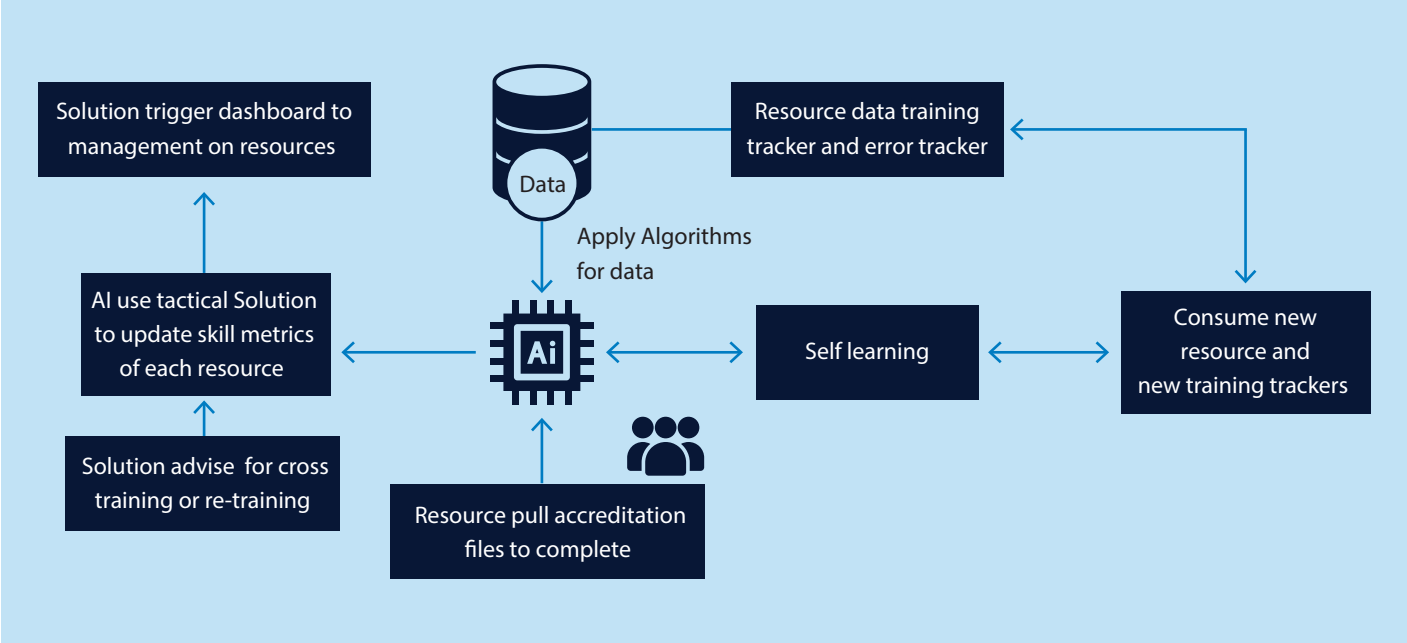

Fig 3:Conversation AI Resource Skilling

However, in a conversational AI model, the AI engine prepares skill metrics based on resource data and updated training trackers in database. It automatically prepares dashboards based on resource skill and publishes their current status to senior management. In addition, the AI chatbots can advise analysts on cross-training or re-training requirements for resources based on their skill metrics and the error tracker provided in the database. The AI engine also has an inbuilt self-learning capability to keep track of new resources and new training trackers.

The benefits of the conversational AI approach to resource skilling includes a great reduction in analyst effort towards the continuous monitoring of, and preparing skill metrics for, numerous resources. The AI approach also improves resource skilling in general and thereby reduces attrition.

Going forward with AI

The development of conversational AI has shown a tremendous improvement in the recent past, especially when it relates to the BFSI industry. However, the technology does have its constraints such as being currently limited to English as a primary language, which requires expanding its use globally to interact with other languages. Also, larger organisations leveraging the interactions of customers using artificial intelligence chatbots need to deploy sufficient measures to securely process and store the information that is processed. Towards the mitigation of such constraints, technology teams should proactively leverage additional training datasets into current systems to address these challenges going forward.

The push towards conversational AI in the BFSI industry will bring in an advanced approach to sustained process digitisation. Though it is laborious to scale, conversational AI can be systematically developed and fast-tracked via modern tools and latest frameworks.

As these tools and frameworks get rapidly deployed, one can visualise that between 2025 to 2030, conversational AI will improve to be able to dynamically store all exceptions and their resolution factors from standard operating procedure documents. Further, effective 2023 onwards, the growing intelligence of conversational AI would be able to track resources right from their onboarding, measure their accuracy levels, and intelligently inform management with performance dashboards that include visualisations of resources on various parameters such as process skills, accuracy levels, training levels, and cross trainings.

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