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ACTIVE.AI

*TERRAFORMING
THE BANKING
STRUCTURE
ON NLP'S
FOUNDATION*

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CO-FOUNDER & CEO

₹150





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COVER STORY

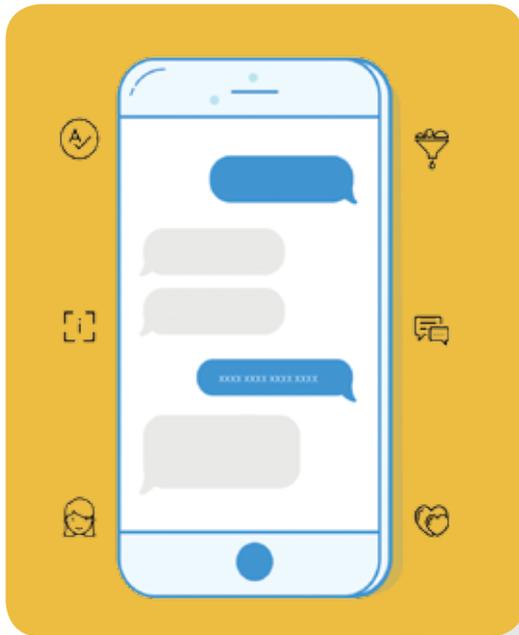
ACTIVE.AI

TERRAFORMING THE
BANKING STRUCTURE
ON NLP'S FOUNDATION

By Emmanuel Christi Das

As we gaze far into the year, we can see that the conversational AI landscape is primed for increased consumer adoption. In fact, in a recent survey, nine out of 10 people said they prefer messaging directly with a brand. This year, Apple, Facebook, Google, and Amazon, all leaned into messaging and conversation. While chatbots are still at a nascent stage in the banking industry, bots will quickly gain in sophistication to the point that they will be able to perform all tasks previously owned by customer service representatives.

Active.ai, a Singapore based Fintech startup with an innovation lab in Bengaluru, is using artificial intelligence (AI) to deliver Conversational banking services. The startup helps banks redefine their digital strategy for the future, bringing in automation and insightful customer engagement. Built for banking technology, their conversational AI uses advanced natural language processing (NLP), natural language understanding (NLU) and machine intelligence to enable customers to have natural dialogues over messaging, voice or IOT devices.



number of options will be presented on screen, which will be singularly driven. This means to first select transfer money to an account option, select the account from which to pay. Next follows the amount entry and the account to be paid to. After an OTP factor authentication, the payment is done. Presently, this is how current online banking apps are working. But unstructured conversational interfaces are complex. In a peculiar situation, a customer wants to pay 100 rupees but does not understand as

TRINITI COMPONENTS

- **Classification** – Multi learning classifier with batch learning, online learning, co training, and active learning.
- **Natural Language Understanding**- ML based Natural Language Understanding to determine query focus and extract link entities
- **Spellchecker** - BiDirectional Context Sensitive Spell check module with support for acronyms.
- **PreProcessor** - Advanced temporal entity processing and numerical entity processing to standardise formats.
- **ConversationAnalyser** - State-of-the-art knowledge representations, predicate logic, co-reference and attentional stack
- **ConversationProcessor** - Using rhetorical structure, discourse structure analysis, and concept hierarchy.
- **Compound Statements**- Ability to split compound instructions in a conversation via resolving verb ellipses etc.
- **Small Talk**- Contextual generic conversations to engage users on general chit chat.
- **Self Learning**- Domain aware knowledge repository to provide accurate context aware responses.
- **Pre Trained Models**- Ontology and Pre Trained Language Models for Financial Services Industry.
- **API**- Easy to use REST API's

Technology has been dynamic over the past few years, and therefore in a blink of an eye, a technology that came yesterday becomes obsolete the next day. Similarly, conversational AI's approach is wearing thin, despite new bots arriving in the marketplace, because it only works well for those conversations with a predefined flow - such as ordering flowers, finding a yoga teacher or making a reservation. Attempt to ask bot complex questions, full of unexpected stops and starts, word choices or implied meanings, and suddenly, one may find oneself with the bot version of Twitter's infamous Fail Whale.

Active.ai has built a specific narrow spectrum use case for banking. In banking, customers are used to certain ways of interaction with banks. Currently, if a user opens the banking app, a menu with a

to how the app works. This becomes an external logical question. This sort of query cannot be understood by the banks and hence is an unstructured situation.

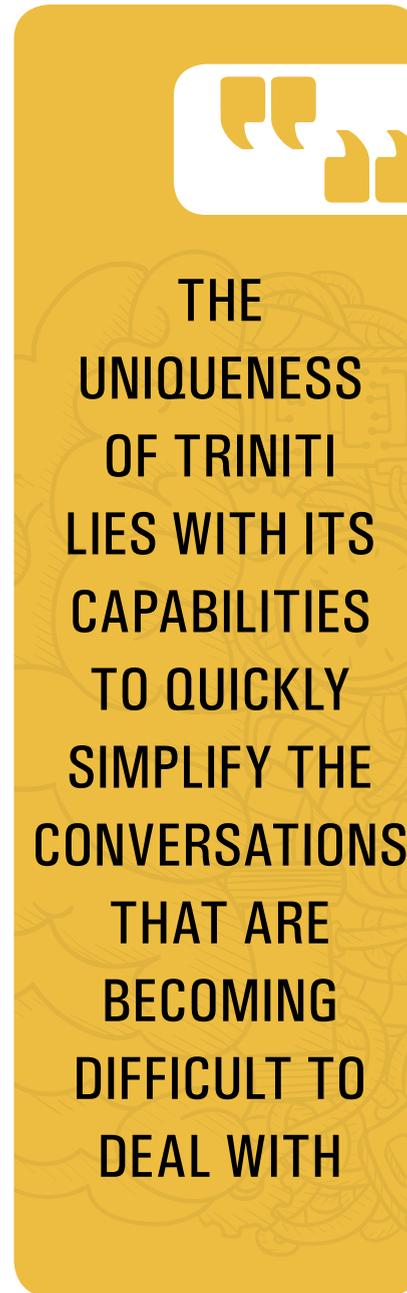
As a response to this situation, Active.ai's NLP and NLU interpret the customer's grievances or requests. The intent, the attribute and the relationships are established and understood automatically and immediately. The AI directly understands all these parameters and converts to a transaction and executes it. Building such unstructured interfaces with AI logic is fairly complex. As for Active.ai, the team engages in training the data and systems more exhaustively

and it involves completely iterating the algorithms over a period of time. This is to ensure that the end product gets an increasingly higher degree of accuracy, with a contextual focus on financial services.

The Triniti Engine

Active.ai team of experts have built a robust enterprise grade AI engine that can be deployed on premise or on the cloud. The engine comes pre trained with data sets and models of financial services such as retail, wealth, insurance, and corporate banking. Triniti, as explained by Ravishankar, Co founder & CEO at Active.ai, can be utilized or deployed in two ways. Since the AI engine has its own API, a company can put to use this pre-built API and build banking and other services on the top. Secondly, a business can couple the Triniti engine along with Active.ai's entire middleware for their AI platform, having ready-made connectors into the banks and the channels they use to engage their end-users.

The uniqueness of Triniti lies with its capabilities to quickly simplify the conversations that are becoming difficult to deal with. This is even more remarkable as the team of experts has to train the data for the domain itself, and that's quite exhaustive. It requires understanding the different components of Triniti. The first component of trinity is 'Small Talk' which allows contextual generic conversations to engage users on general chit chat. Also, this component has auto-suggestions which further help the customer as they may not initially know how to ask the platform. Hence, the 'Small Talk' understands the customer itself. The knowledge to interpret the short-forms used in every day lingo is also deployed. "These features are



what Triniti offers their clients out of box package. Triniti is thus pre-trained with models and data for many banking services", adds Ravi.

As for banking use cases, Triniti is designed to differentiate between two different sets of transactions. The customers using unstructured interfaces may start writing something. In such situations, Triniti

is trained to understand and identify these different sets of transactions. Intelligently, the account holder can just come back and go through both the transactions step by step.

On Route to Transforming the Global Banking Phenomenon

With the R&D activities being carried out in Bangalore, Active.ai has an office in Australia too. Geographically Active.ai is expanding has established an office in New York. The company has been working towards becoming a global player and is currently working with 15 + banks presently. "We want to release Triniti app to the entire developer community, so that a larger number of people can come onboard", informs Ravi.

The conversational AI concept is exponentially becoming a billion dollar industry and over the next few years is destined to grow even more into the financial sector. Soon, every financial institution will be using a form of conversation AI to engage the customer base, further transforming the way people interact with their bank or insurance company.

Active.Ai has enabled four of India's top-tier banks, as well as banks and insurance companies in Malaysia, Singapore, Thailand, and the Philippines. On the heels of launching with CIMB bank, a tier 1 bank in Malaysia, Active.Ai now has their sights set on the North American market, securing 2 new clients in the region.

As a global AI player, Active.Ai believes in building a smart, agile, flexi workplace with a team that collaborates and contributes to constantly evolve along with a culture to inspire to do the best for their customers, investors, families, and themselves. [CR](#)