

CCW Vegas 2019 - Observe.ai



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Swapnil Jain, CEO and Sharath Keshava Narayana, CRO, Observe.ai discussed how their agent-first voice AI platform differs from traditional speech analytics software which is built on text transcription. The company uses what they call a SpeechNLP approach to perform a deep analysis of the combined audio and text stream to detect patterns in the tone of the speaker.

Let's talk a bit about Observe.ai, can you tell us how you got started and what you saw as an unfulfilled market need?

Sharath: I had a background in product research and was working in Manila in the Philippines which was perhaps the Mecca of the contact center world. At one point it had more than two million agents in one metropolitan area. Most of the techniques for speech analytics were archaic. I became aware that there are many operational advances in a contact center that could be augmented or automated with the help of AI. After seeing things in that context, I believed there was a need in the contact center ecosystem for a true speech analytics technology company with a different approach. Suppliers building speech analytics solutions were simply applying text transcription technology, which is the way things have been done for the past 20 years. They would then utilize some keyword spotting algorithm. Some would even do some form of Natural Language Processing, but the program was still primarily text-based. Our hypothesis was that businesses needed to measure customer experience by listening not only more closely to what customers were saying but how they were saying it. Our interest was building a true speech platform to manage customer interactions, one which helps the contact center, the agent, and ultimately the customer as well.

When you say a 'true' speech platform, what makes yours more "true" than existing solutions?

Swapnil: When you hear the term 'speech analytics' in a conversation, there are so many companies essentially trying to say the same things. The big difference comes into play when you look more closely at the current conversational AI systems employing speech analytics. It seems like these suppliers are trying to build conversational AI for text. Now the industry is trying to take the same model to voice. We only focus on voice, we don't do multichannel.

What they're trying to do is use the paradigm of only taking into consideration what people are saying...the content of a conversation. In the world of text-based speech analytics, the meaning of statements made in contact center conversations lacks context. For example, when a customer makes a statement like "Hey...can you please tell me when I might get my refund?" it sounds benign. But what the customer is saying is really "Hey...can you please tell me when I might get my refund!" While the two statements are essentially the same when the conversation is based on text transcription, where voice intonation is stripped out, and the business completely misses out on the context of what is happening. This is super-critical because the personality integration puts calls into context. Because contact centers are all about the customer experience, understanding intent and customer emotion --which comes from tonality-- needs to be part of the equation. That is first big difference we believe puts us ahead of our competition. The second

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difference is as we noted, all these conversational AI systems are built on text and they're not updating their model. If you think about humans communicate with businesses today, we are looking at three primary media: chat, email and speech. In chat, perhaps the most structured form of content, many write properly grammatical sentences, put in full stops, then check what they wrote. I'm sure that chat is weaker than email in that respect, but still fairly structured because it is written in sentence format. But when it comes to speech, it's a very different story. Just imagine how humans often speak. They don't always complete sentences and the grammar is wrong. They cut each other off in conversations, so when a supplier tries to take the same model in interpreting speech that it does for chat and email, in effect, the model isn't even sure that it's the same language that is being spoken. A text-based model can't make sense of conversational data when sentences are being cut off and there's no full stop. But if you think from an NLP perspective, why should this be? Now a business can move beyond the existing models with a solution that focuses on the audio signals as opposed to simple text transcripts. When we say true speech, we mean that we are a pure-play speech company who brings proven expertise to giving our customers the full context of conversations.

Our technology is backed by a chief scientist from Samsung with a strong research background who runs our AI group. He is the founder of a product called Samsung Bixby which is a competitor to Google Home. Our speech-to-text spatial accuracy is at least 20% higher than Amazon. That's how far our technology is taking us.

Let's talk about AI compliance and QA. You state that you can do QA for a 30-minute call in less than a minute: how do you accomplish that?

Sharath: In most cases, looking at current contact center QA processes, there's one QA person for every 20-30 agents. That specialist's job is to pick up and analyze the call recordings. When all calls are recorded the QA team might pick two to five calls per agent per month to review. What does that mean? They have a checklist of questions that they need to listen to and determine whether the agent did or did not perform certain required functions. There is no longer a need for businesses to do this manually. Our technology can understand everything that happened in a call and answer such questions automatically. Even if the solution is not able to immediately supply the answers a business seeks, we have an advanced audio player which marks the elements of a call that need to be reviewed. For example, a collections agency can ensure that agents followed the proper protocol when contacting an individual to collect debt. A QA person listening to call and filling in sheets for 30 minutes can instead look at the call player, see the transcript and find the needed information annotated in a mini-window, ready for review. In 30 seconds, the QA person can locate the call elements they need to review and be done, making the process infinitely more efficient. This has been proven time and again with our customer, some of whom have reported improvements of making the process as much as five times faster.

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It would seem to be easy to determine whether a company is in compliance with regulations. The AI can be trained to say yes or no to certain requirements. How does it work when an agent disagrees with the QA's findings? Can the company listen to the call to prevent a long back-and-forth?

Sharath: The company can use the call player to show the transcript and play both the agent's and customer's part of the call separately if necessary. It can quickly go directly to the selected points in question and has the advanced capabilities to review the call much more quickly. It's an always-on system that listens to every single call, so no company need worry about picking up their sample from a group of randomly selected calls. Everything is transcribed and annotated and ready to be reviewed.

The company can select all the statements they expect to be used in every single conversation and sample the calls that do not have these required points covered, which is one of the first ways they can save time. Another time-saver is that it is not necessary to listen to the entire call. They can review the moments within the call that they wanted to track, and do it up to five times faster. We've also built in a feedback loop system. If a supervisor sees something missing in a call, they can immediately forward details on that instance back to the agents in question. The feedback is very qualitative, it can pinpoint exactly where an agent has gone wrong in a specific section of a call. When they receive it, they can clearly see how they might have mishandled the problem analysis or not properly captured the next series of steps.

That feedback can be given in real time or delivered subsequently depending on the company's resources. Our technology is not limited by real-time or non-real-time constraints, but it is dependent on the infrastructure of the business to which it is connected.

Since we're talking about integration, what platforms are you integrated with?

Swapnil: At this point in time we are integrated with companies such as Talkdesk, Genesys and Mitel, but we could integrate with any telephony system if they have an API. We have APIs with Cisco, Avaya, LiveOps and Five9. But with Talkdesk, Mitel or Genesys it's a one click download to implement Observe.ai and the next minute, all the company's calls are being analyzed.

Have you been able to track results yet in the companies that are using your platform? What types of benefits have they been able to realize now that they have been using it for a while?

Sharath: It primarily depends on the use case. So far, the core use case has been companies telling us that they had a team 50 QA specialists to monitor agent activities and that after six months of using Observe.ai, they have been able to reduce those teams by half. So, the solution is starting to pay off by itself with far lower QA costs. One of the world's largest auditing firms is using us to help predict customer churn. Since we have an always-on system, they want to use our platform to review every call to help them determine the probability of each customer churning. They use that feedback to find ways to improve the product or call back the customer and see if it can be handled more to their satisfaction. We also work with a major travel firm which uses us to help qualify a lead. If our platform categorizes a call as a hot lead and it hasn't been closed, then they call back with a discount offer.

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As we wrap up, is there anything more you'd like our audience to know?

Swapnil: As an engineer, I hear a lot of AI buzz in the market. But while everyone is talking about it, we're still far away from total automation. Thousands of blogs warn about how jobs are going away but the people who write these blogs don't really know anything about their subject matter. We've started a company that is succeeding right out of the box by using advanced technology to make measurable improvements.

In collecting data for call recordings, we help businesses provide the support their customers are looking for. The data is available to be used to build a blueprint of how to improve a customer service system. It's collecting data and then moving on to augmentation.

Our process is to go from data collection to augmentation. The question is 'how do you bring a human and an AI entity together to provide amazing customer service?' We're not ready to claim total automation because it is still too early in that journey.