
Best Practices in Intelligent Search

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Getting Smart About Intelligent Search

By Marydee Ojala, Conference Program Director, Information Today, Inc.

I'm amazed at how many objects are becoming smart. I think it started with smartphones, which aren't particularly new—Apple introduced the iPhone 13 years ago. Smartphones aren't static objects, though. They continually add new features, improvements, and enhancements to make them even smarter. Beyond phones, we now have smart appliances, smart cars, smart watches, and even smart cities. Your smart coffee maker is voice activated, your smart refrigerator keeps track of your groceries, and your smart doorbell reveals who's standing at your front door.

We have a smart thermostat, and the relatives we visited last winter were amazed that we could change the temperature at home using a smartphone so that the house was warm when we arrived. Before we had such a smart solution, we either arrived at a cold house or asked a neighbor to whom we'd given a house key to come over and manually turn up the heat.

"The advent of voice-activated assistants, such as Alexa and Siri, have conditioned us to voice search. Web search engine companies report that more and more queries are coming in as speech rather than words entered into a search box. Contact centers now rely on real-time speech analytics to streamline resolution of customer concerns."

I suppose you can be too smart. Being called a smart aleck or a smartypants is not a sign of respect. We applaud smartness in objects but not necessarily in people. He's "too big for his britches." She's a "know it all." Ouch, that smarts. Strangely, if you credit your smart device for your smart aleckiness, it's acceptable. See, I'm not being a smartypants, that knowledge is right here on my phone.

And let's not forget Smarties. I'm sure that, come October, there are plenty of children wishing that the Smarties candy they receive for Halloween will actually make them smart. If you are smart about Smarties, you'll know that the Smarties you find in the U.S. aren't the same as those in the U.K., Canada, and almost every other country in the world. Outside the U.S., Smarties are chocolate-covered candies, originally produced by Rowntree's but now owned by Nestlé. The U.S. candy has no chocolate. It's a sugary tablet

produced by Smarties Candy Company, a third-generation family business.

Smarter Searching

It's not just smartphones, smart houses, and smart transportation. It has not escaped the notice of Kelly Koelliker, Verint's director of content marketing, that search is also getting smarter. As she notes, search has moved way beyond simply keyword matching. It evolved through technologies such as word stemming, synonym recognition, and natural language processing (NLP). The latest improvements to make search smarter revolve around speed and relevancy. The whole idea of smart search is to make search appear much less "searchier" and more intuitive.

Koelliker cites five areas in which search is getting smarter. Artificial intelligence and machine learning use deep content modeling to determine the intent of the query. If

the search engine knows why the person is asking a question, it can provide a better answer. Based on who is asking, what they've asked before, where they are located, and whether they are currently involved in a particular project, answers can be tailored to the individual and, thus, be more accurate. Done well, it's the search equivalent of mind reading.

Search as conversation is another development. The ease of asking a question verbally versus typing it out on a keyboard is evident. Who doesn't find it easier to speak than to type, particularly if your typing prowess is limited? The advent of voice-activated assistants, such as Alexa and Siri, have conditioned us to voice search. Web search engine companies report that more and more queries are coming in as speech rather than words entered into a search box. Contact centers now rely on real-time speech



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analytics to streamline resolution of customer concerns.

Intelligent Virtual Assistants

Allied with this is intelligent virtual assistants that can interact with customers, creating a conversation to solve problems. Chatbots that not only understand spoken language but also recognize customer intent are revolutionizing call centers. The trend towards intelligent virtual assistants is playing out by seamlessly coordinating customer and product data. And no search box is actually needed, since information can appear on websites or integrated into chat boxes. As Koelliker puts it, "getting answers doesn't feel like searching at all."

Even smarter is the notion of proactive search. When you go to a website, the system knows who you are, what you've previously purchased, and what questions you've asked before. Essentially, it makes an educated guess about why you've returned. It can then display content relevant to your question before you ask the question. Finally, there's related search. This links related content together, on the fly, and presents the user with additional information the system thinks the user would find interesting. This is particularly relevant for complex queries. Providing suggestions for related articles is greatly streamlined when AI dynamically links to the related information, adding value to the customer interaction.

Sweet and Smart

It's OK to be a smart aleck about search. You want search to be fast, intuitive, and non-intrusive. Think about Smarties candy for a minute. Searching for Smarties should deliver different results based upon whether you are in the U.S. or not, whether you crave chocolate or not, and whether your intent is about candy at all. That's part of what AI brings to search. You can locate the candy expert within your organization and gain insights about the confectionary industry. Proactively, the candy expert will approach you. Without smart search, none of this is possible. How sweet it is. ■

Five Ways Search Is Getting Even Smarter in 2020

By Kelly Koelliker, Director of Content Marketing, Verint



Kelly Koelliker

Kelly Koelliker is director of content marketing at Verint with a focus on contact center workforce engagement solutions. With more than 15 years of marketing and sales experience, her expertise in the customer service industry covers such fast-evolving categories as knowledge management, natural language search and CRM.

Search engines have been around for decades. But over the years, the amount of content to be searched has skyrocketed. At the same time, users' expectations for finding the right answer immediately has also increased significantly.

Search engines had to do better, and they did. What started as simple keyword search evolved to include stemming, synonyms, and the beginning of natural language processing. Improvements to search systems are critical, since the speed at which we can find information is at the root of cost savings, customer satisfaction, and more. As we start a new decade, it's encouraging to see that intelligent search continues to improve. Here are five ways search is getting even smarter in 2020:

1. Artificial Intelligence

Advancements in artificial intelligence (AI) have touched virtually every aspect of technology, and intelligent search is no exception. AI is able to leverage deeper content modeling to truly understand the intent of the user. This allows the technology to create a better match between a user request and an appropriate response. Further, instead of just analyzing the words of the query, the full set of user interactions and context (identity, history, current activities, etc.) can be intelligently processed to define the knowledge need. Knowledge results can be tailored to each channel, interface, and interaction. To put it simply, AI and machine learning allow a search engine to process a request the same way a human brain answers a question.

2. Voice-Based Search

For years, typing a series of keywords was the first and necessary step to searching. Voice search has changed all that. Now, users can simply "ask Alexa" or any of the other voice search systems on the market. While voice search has obviously reduced effort for people finding answers on their own, it has also revolutionized search in the contact center. With real-time speech analytics, contact center agents can simply have a conversation with customers about their issue. As the conversation unfolds, search results will automatically appear on the agent's desktop related to the

words spoken in the conversation. Using voice search in this way can have a major impact in call handling time and first contact resolution.

3. Intelligent Virtual Assistants

With intelligent virtual assistants (IVAs), getting answers doesn't feel like searching at all. These highly sophisticated chatbots can understand everyday language to determine user intent and carry on a virtual conversation with a user to determine an answer. IVAs can answer even complex questions requiring multiple points of

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clarification or personal questions that require access to a user's account information, products, and more. They can be placed on websites instead of a normal search bar or integrated into a chat box to deflect chat conversations. They can even be used in an IVR to deflect questions coming in on the phone channel.

4. Proactive Search

As customer expectations for fast service grow each year, the best kind of search is not having to search at all. With proactive search, an application automatically shows search results that customers are likely to need before they ever type a search. How? Well, the words a customer types into a search box are just a small portion of what an application can use to help. With proactive search, the system uses data such as what web page the customer is on, what products they have, what questions other customers are asking, and more. In

many cases, this information is sufficient to display content the customer is looking for without them ever having to type a word.

5. Related Search

In proactive search, an application shows search results before the user searches. With related search, the application shows results after users are done searching. Often, a customer's need is more complex than can be answered by a single piece of content. After a search is completed, the user may need to search further to find more information to fully resolve the issue. Some applications

offer "related articles" that users can browse after reading their original answer. The problem is that most of these applications require the system administrator to manually create these links. New technology uses artificial intelligence to dynamically link related content together, saving a tremendous amount of resources while still providing the value customers need.

These five enhancements to intelligent search have one thing in common: They all make it easier for users to find what they need. As the amount of information we create continues to grow, the primary goal of intelligent search is to help make it easy to find the right needle in an ever-growing haystack. ■

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