Leveraging data science to illuminate the modern consumer decision journey

Today’s consumer decision journey is rapidly expanding into something bigger and more intricate than ever imagined when the internet first arrived on the scene. Searcher behavior continues to evolve at breakneck pace, especially as new forms of mode and modality push marketers further into the realm of AI and machine learning. In order to fully understand the complexities of the new consumer decision journey, today’s advertising teams must accommodate a new role: data scientist.

The advertiser analytics group at Microsoft Advertising (my employer) is taking deeper dives into internal search query data to help marketers get the visibility they need. What exactly does today’s CDJ look like? Well, like this:

What we’re looking at here is an actual representation of recent search queries on Bing related to enterprise cloud software. It’s a network comprised of search queries and the relationships between them, with *relationship* defined as searches conducted by the same person in a close window of time. Let’s dive in and explore.

Messy, right? Well, understanding searcher behavior is a complicated problem. First off, let’s look at all the different communities within this network, which are visualized by color. It should become quickly apparent that these queries are clustered thematically; queries around VPN are given their own color, and big players in the space such as Azure and AWS have large communities. It is important to note that queries are not placed in communities based on the content of the query itself, but rather based on the regularity with which they are searched by the same user. This is an important distinction, and it gives us something that is hard to come by: a raw, unbiased look at where brands are positioned in their space.

Focus on query relationships

The size of a community is always an interesting factor, but it is the relationships between queries that can best unlock hidden insights. No matter what your product or brand space, there are queries that exist in one community, but have relationships with queries in other communities. For instance, we see below that the queries “cloud computing” and “IoT” have relationships with each other, and with the Azure and AWS communities. This is the connective tissue that drives deeper insights into your customers, your business and your competitive landscape.

The key takeaway with relationships is that the vast levels of

interconnectivity between queries illustrate the true sophistication of searcher behavior. Searches are seldom linear, occurring more in clusters that don’t necessarily align with funnel-like behavior. Enduring convictions about consumer intent, loyalty and the different types of contributions made by brand and non-brand queries are challenged by the data. To help drive the point home, let’s extract some insights that are only accessible with this acknowledgement as a prerequisite.

We’ll start by isolating the query “what is AI?” We can instantly see in our network that this query has been searched by users who have also searched “what is artificial intelligence” and “AI.”

In turn, we see associations between these terms and brand nodes, such as “IBM” and “AWS.” However, ultimately, we are able to see that “what is AI” is a part of the same community as “IBM,” telling us that many people are searching for both. IBM is doing a superior job at positioning their brand closer to these types of consumer questions.

How about one more example of how embracing the intricacy of searcher behavior can open pathways to a more comprehensive understanding of industry dynamics? Like other big players in this space, Google has its own community within the network. The query “Google Cloud” is the central node in this community, and based on what we’ve seen in other communities throughout the network, we would likely presume that other queries within the community would also be related to Google’s cloud product. However, this community defies our expectations; it contains a mix of competitor and non-brand terms, many of which contain the term “cloud.” From this, we can denude that Google has positioned their brand close to the term “cloud” – a nice mindshare win for them, and an opportunity for their competition.

AI in the CDJ

How can today’s marketers manage such complex customer journeys? Firstly, it’s important to have a strong partnership with your publisher. Your account teams are champions for your business, and part of that is stewardship for relevant data. The second thing is to invest in data science within your advertising program. Unraveling intricate problems will often call for technical expertise, and consumer behavior grows more sophisticated with every technological advance. And finally, AI and machine learning are already being infused throughout the space to help marketers collect, analyze and leverage massive amounts of data to reach future customers in better

ways.

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