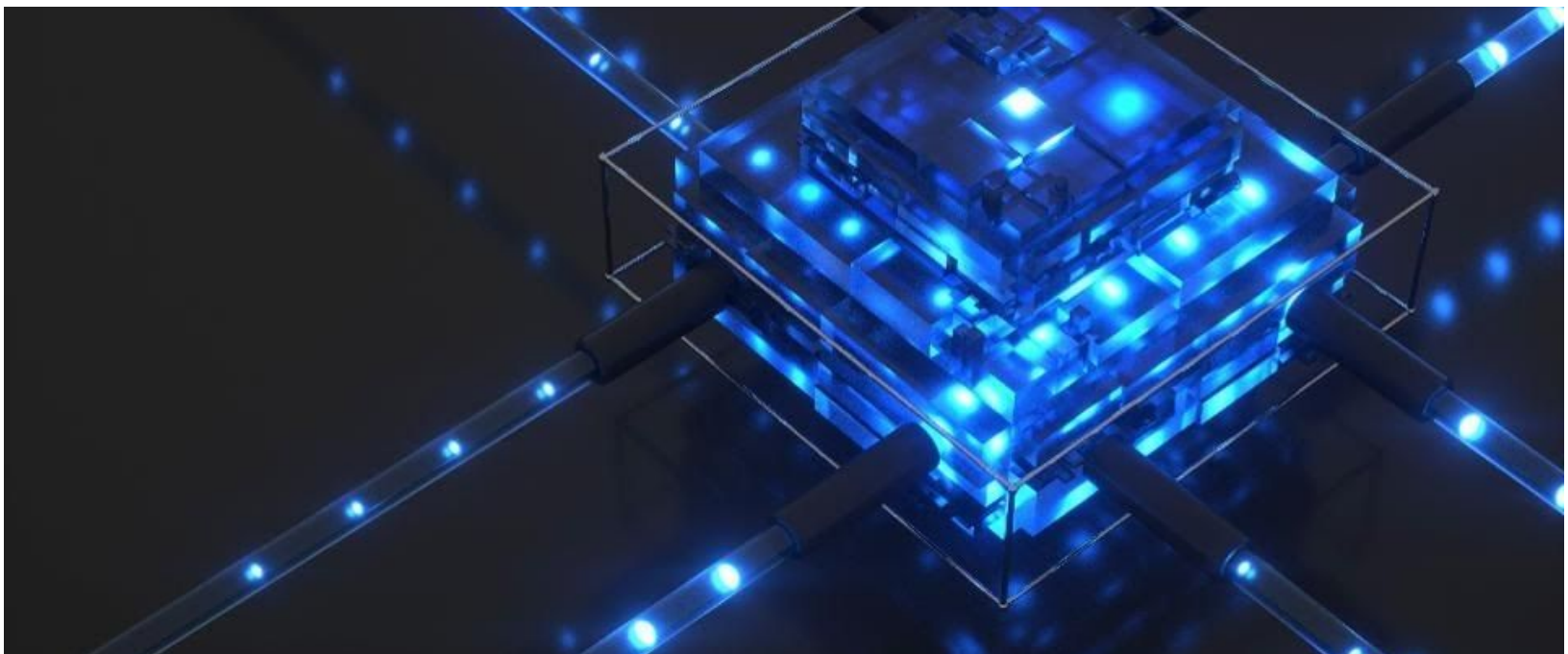


Case Study:

How Artificial Intelligence is Changing Healthcare Marketing



In 2019, Steward Hospitals engaged [Singularity Healthcare](#) in a three-month experiment to take control of the marketing efforts for the orthopedics department of one of its Boston-area hospitals and help boost the number of patients booking appointments and surgeries. Powered by artificial intelligence, [Singularity](#) began running a multi-media marketing campaign that focused not only on booked appointments, but specifically on finding candidates for robotic hip and knee replacement surgeries. Quickly, [Singularity](#) began finding potential patients and booking appointments.

In the weeks to follow, not only did the number of new patients at Saint Elizabeth's Medical Center's Bone and Joint Center continue to steadily grow, but so did the percentage of new patients who were proceeding to schedule robotic hip and knee surgeries.

By the end of the three-month campaign, the Bone and Joint Center was fully booked for the next several weeks and struggling to handle the enormous volume of patients. How did we do that?

AI at Work

Today, Amazon, Facebook, and Google are leading the AI revolution, and that's given them a huge market advantage over most consumer goods companies and retailers by enabling them to lure customers with highly personalized, targeted advertising, and marketing. However, a host of startups like [Singularity](#) are now using AI marketing tools that have become both easier to use (that is, they don't require hiring expensive data scientists to figure out how to operate the tool and analyze its outputs) and less expensive to acquire, with software-as-a-service (SaaS), pay-as-you-go pricing. And instead of optimizing specific marketing tasks, or working within individual marketing channels, these new tools can handle the entire process across all channels: search engines, social media, email, etc.

In the case of [Singularity](#), our AI tool drives confirmed hospital appointments and booked surgeries by generating leads, defined as potential patients who express interest in seeking treatment at our partner hospitals by clicking on our online ads and filling out a form on our website.

Armed with creative content created by our in-house marketing team, plus key performance targets, our technology begins by analyzing existing patient data from our customer relationship management (CRM) system to isolate defining characteristics and behaviors of orthopedic patients.

In Boston, the [Singularity](#) technology began creating a profile for potential orthopedic patients using detailed yet anonymous information from hospitals, doctor's offices and labs. It then cross-referenced this medical information with third party demographic and psychographic data from Google, Facebook and other sources to complete the profile of a candidate for orthopedic treatment based on medical history, lifestyle, age, hobbies, occupation and many more characteristics.

Using this information, [Singularity's](#) technology identified more than a thousand "lookalikes" who resembled past and current orthopedic patients. Then, it used the data gathered by our research to predict which of our dozens of ads, headlines, and visuals would most likely convert

each individual into a candidate for treatment by using social media, search, display, email or SMS.

Constantly adapting to what was and was not working, our technology learned and improved, autonomously altering its message to the audience in order to reach potential candidates and motivate them to click.

For example, when it discovered that ads with the word “call” – such as, “Speak with our concierge care experts. Call now!” – performed 447% better than ads containing the word “Schedule,” such as, “Schedule an appointment with one of our concierge care experts” our technology immediately changed “schedule” to “call” in all ads across all relevant channels. The results spoke for themselves.

At [Singularity](#), AI evaluates what is working across digital channels and what isn't, and uses what it learns to create more opportunities for conversion. In other words, the system allocates resources only to what has been proven to work, thereby increasing digital marketing ROI. Eliminating guesswork, gathering and analyzing enormous volumes of data, and optimally leveraging the resulting insights is the AI advantage.

As the Boston campaign progressed, [Singularity's](#) platform had not only third party data to work from, but first party data as well – that is, the information compiled from the campaign itself. When the technology began using the data collected from Singularity's own CRM, website analytics and advertising analytics, the results grew not just steadily, but exponentially.

The AI Advantage

Healthcare marketers have traditionally used patient personas – broad behavior-based customer profiles – as guides to find new ones. These personas are created partly out of historic data, and partly by guesswork, gut feel, and the marketers' experiences. Companies that design their marketing campaigns around personas tend to use similarly blunt tools (such as gross sales) – and more guesswork – to assess what's worked and what hasn't.

AI systems don't need to create personas; they find real customers in the wild by determining what actual online behaviors have the highest probability of resulting in conversions, and then finding potential buyers online who exhibit these behaviors. To determine what worked, AI looks only at performance: Did this specific action increase conversions? Did this keyword generate sales? Did this spend increase ROI?

Even if equipped with digital tools and other marketing technologies, humans can only manage a few hundred keywords at a time, and struggle to apply insights across channels with any precision. Conversely, an AI tool can process millions of interactions a minute, manage

hundreds of thousands of keywords, and run tests in silico on thousands of messages and creative variations to predict optimal outcomes.

And AI doesn't need to sleep, so it can do all this around the clock.

Consequently, AI can determine exactly how much a business should spend, and where, to produce the best results. Rather than base media buying decisions on past performance and gut instincts, AI acts instantly and autonomously, modifying its buying strategy in real-time based on the ever-changing performance parameters of each campaign variable.

Taking the AI Plunge

Because AI is new, and because providers will be wary of relinquishing control and trusting a black box to make the best decisions about what people will or won't do, it's fine to adopt AI tools and systems incrementally. One good way to discover the potential of artificial intelligence powered by [Singularity](#) is to run a small campaign perhaps for a single city, hospital or department.

Within these experiments, it's important to define key desired performance results; for example, new customers, leads, or an increased return on advertising spending. In other words, know what you want. With a specific, quantifiable goal, Singularity can target our technology toward achieving--then exceeding-- exactly the results you seek.

It's worth taking the plunge, and, in fact, there's an early adopter advantage. With the system learning and improving all the time, the algorithms continue to be refined. In the first few weeks of a [Singularity](#) campaign, confirmed appointments may double in number, but in the few weeks to follow, they may quadruple and beyond.

That's good news for our partner hospitals and their physicians, and not such good news for their competitors.