

Artificial Intelligence: Optimizing the Experience of Digital Marketing



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ABSTRACT

The wealth of media and channels that have arisen in the past years has created a complex problem for modern marketers. Today's advertisers must simultaneously dedicate their energy to brand storytelling, audience-based targeting, insights from customer data, personalization, and customer experience, all across a myriad of new media channels and devices. Consumers have raised their standards for personalization in marketing campaigns, and without a way to efficiently leverage the increasing amount of data they produce, brands will consistently fail to meet those standards. A combination of the advertising and marketing technology ecosystems offers hundreds of software solutions that claim to automate and simplify many different processes for marketers, from email creative optimization to the buying of digital media. In fact, there are so many of these solutions that piecing them together into a comprehensive "marketing" stack is nearly impossible. Marketing stacks today have become so complicated that operating them is just as, or even more difficult than, manually completing the tasks they're designed to automate.

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It is important to reiterate that when talking about a marketing stack, it means a converged ad and marketing stack - both the acquisition tools and data, along with the customer relationship marketing tools and data. This is the world brands should strive to live in if they want to truly own their customer data. One item that makes building and consolidating a marketing stack so difficult is that solutions are split between integrated suites and individual point solutions. Vendors are trying to straddle two priorities - having the best-of-breed solution to address a particular marketing need, and offering a fully integrated solution to deliver more consistent brand experiences to customers. Trying to mix the best-of-breed and fully integrated solutions can be a logistical problem, especially when considering the work that must be done to make the resulting suite functional across all channels. There's also the issue of ad agencies and what components get outsourced to them. Over the past few years, the arrival of new technologies to market and a desire to own all their data in-house have

caused brands to pull some tasks back from agencies, particularly on the data and execution side. Outsourcing only further complicates an already complex ecosystem, and further reinforces channel-based silos that hinder communication and make it much harder for marketers and brands to run coordinated campaigns.

DIGITAL COMPLEXITY HAS MANY FACTORS

There are a few factors that help to explain why digital technology has so far not only failed to simplify the work performed by marketers, but in many ways made it more complicated.

- Marketers, by training, are technology “light”: The average marketing education (in school) doesn’t require becoming versed in technology management, so when marketers enter the real world and have to deal with technology on the job, they either outsource or become too dependant on vendors for assistance in utilizing their technology.
- Pace of change: Thanks in part to expansive capital, the rate of innovation over the last ten years has grown exponentially. This rapid development has had two key effects: a massive increase in the amount of relevant data available for marketers to use, and the entry of hundreds of point solution technology vendors, each of them claiming to be the answer to every marketer’s problems. It’s a constant struggle for marketers to learn how each piece of technology works in the first place, let alone figure out how of them fit together.
- Increasing consumer touchpoints: The complexity of the modern media landscape has led many companies to seek separate data/analytics and optimization/execution tools for each channel. These tools are typically myopic in their execution, and while they may be loosely connected with some form of middleware, any bridge between these two functionalities can only work so well if it’s not inherent to the system.

A tech stack can be made vastly more simple and intuitive by consolidating the tasks performed by many of its various elements — from the analytics platforms that analyze campaign performance to the individual pieces of ad and marketing tech that execute and optimize campaigns on each respective channel — under one “execution” solution. Replacing these tools with artificial intelligence can improve communication with customers by reducing the time marketers spend on analytical work, freeing them to focus more on strategic tasks like messaging and creative strategy.

Not all AI is created equal, however. Much of the marketing-facing AI technology available today has a very particular application; for example, an AI product might be built specifically for content, or for data. As a recent eMarketer report points out, while use of the technology in marketing is on the rise, “Marketers across all industries are experimenting with ways to put AI to use.” The report cites applications as disparate as “business intelligence, customer acquisition, programmatic advertising, campaign optimization, and multichannel communication.” The diverse range of applications that qualify as AI has led to some confusion among marketers as to what it really is, with 35% of marketers claiming they “don’t know enough about” AI to adopt it — despite the fact that most marketing efforts already rely on some form of the technology every day. Some tools use machine learning to uncover marketing insights and make automated suggestions based on them, for instance, but aren’t capable of executing on those suggestions autonomously. Other tools might help optimize content and campaign copy, but because this capability isn’t built organically into the execution and analytics platform, it reinforces silos, which creates more work for marketers. What marketers need is a central “brain” behind their tech stacks that is built to facilitate and optimize the connections between these various functions and tools. This is precisely the role that AI should play in the tech stack.

A good AI marketing platform is built from the ground up on artificial intelligence while utilizing several of the techniques that comprise the technology, including machine learning, predictive analytics, and natural language processing, among others, rather than a set of capabilities or software with machine learning bolted onto them. It should consolidate processes across channels rather than let unnecessary tech platforms segregate the activities that must be connected. And AI

marketing platforms should be simplifying tech stacks to the point that it doesn't take a technical expert to run a great campaign.

So many tech solutions have flooded the market that there are an almost infinite number of different approaches and software combinations that can make up any given marketing stack. With so many different vendors offering various tools and functions across channels, hunting for the optimal set of solutions and vendors can quickly become dizzying. Despite the array of options available, every good marketing stack can be boiled down to four simple groups of solutions: central data repository, content management, product information, and execution/optimization software. Artificial intelligence can play a major role in helping marketers better manage the execution, optimization, and analysis of campaigns and interactions, pulling from myriad data streams to target and autonomously identify new user groups with relevant content without the need for much human intervention.

CENTRAL REPOSITORY FOR CUSTOMER DATA/WEB ANALYTICS

Every company needs a central database where customer data is stored. Contributing to this central repository of behavioral and demographic data are the various web analytics platforms plugged into the campaigns, as well as any Internet-of-Things-connected sensors and devices the company may own. AI must connect all of these disparate data streams to identify user groups, and consolidate them into a firm understanding of what messaging is appealing to which groups.

IT professionals should ensure that data collection mechanisms are properly and automatically transferring new information into this database, but management of it should not require much effort on the part of human employees. AI-based optimization and execution software pulls from this database and acts as an administrator for the analytics accounts - first to develop insights that will influence the development of content, then to strategically place that content in front of those users who are most likely to convert.

PRODUCT INFORMATION MANAGEMENT (PIM)

Medium- to large-scale retailers may have a hard time keeping track of the specifications of their many hundreds of thousands of products. That is a problem when they are trying to reach users with just the right product to fit their specific needs and trigger a conversion, or when they are selling someone a product that it turns out isn't currently in stock. In light of these risks, product information management software (PIM), which helps manage available and in-stock inventory, must be another key component in the marketing tech stack. Product specs must integrate with the optimization and execution software so that specific customers can be targeted with the right products.

EXECUTION AND OPTIMIZATION SOFTWARE

A crucial part of the stack, the execution and optimization software, must work across the marketing channels to inform, coordinate, and adjust campaigns in real time, saving creative teams hours of tedious data analysis. Because this kind of capability requires analytic work at a pace and scale that is impossible for humans to accomplish on their own, the execution and optimization software should run 100% on artificial intelligence. The AI platform must also be able to integrate with every other piece of the tech stack, using information from the central repository to target users with the right campaigns; to create a one-to-one user correspondence with those campaigns, the platform must have access to wherever both content and product information are stored. While many companies today use several execution/optimization tools at once to work with different channels and devices, this defeats the essential point of using such software in the first place: simplicity and ease-of-use. The best possible software works to optimize campaigns across channels, requiring little or no extra coordination on the part of marketing or IT staff.

Artificial intelligence enables marketers to simplify their stack. Implementing AI unilaterally across an entire stack would be a massive project and require exhaustive system changes to replace ingrained technology. It could also result in unnecessary expenses if done incorrectly. In a post for Digiday, Clear Code CEO Maciej Zawadzinski points out that “Many companies added multiple technology layers that charge additional fees on top of the inventory cost; that can add up to 50% to 70% [of the total expense].”

Adding AI systems specifically to the execution side of the stack could be a gradual process, replacing all or some of the point solutions according to the marketing department’s preference and its tolerance for change. Over time, this would simplify the tremendously complex stack of technology used by many companies and their agencies.

That is not to say that replacing any part of a stack is simple work. Addressing the myriad needs of a large marketing organization with a single suite of tools can be very frustrating, especially when working with legacy hardware and software. How an organization implements AI will depend on its needs, its existing tech stack, and its relationships with agencies and publishers. To get a sense of how it would fit into the stack, a company should consider each of AI’s capabilities and what entities or technologies it could replace or manage.

Many technology systems are implemented simply to identify the low-hanging fruit, ensuring that those customers already at the bottom of the sales funnel are given an easy path to purchase or adoption. These systems simply analyze a series of patterns that are repeated over and over again. AI can be used to quickly identify, test, and optimize the paths between those customers and a particular brand or product. Thus, many retargeting, personalization, or optimized messaging platforms can be easily replaced by the speed and efficiency that a proper cognitive-based learning system can provide.

AUTONOMOUS MEDIA BUYING

Media buying, and programmatic in particular, is an environment that is set up for making decisions based on a given set of attributes (price, placement, quality, content, etc.) at the exact nanosecond of individual transactions, which is then governed by human- inputted thresholds. It’s a numbers game based on supply, demand, and the law of diminishing returns. The goal is to pay the exact right price for the ideal grouping of attributes per message that is likely to lead to success. Beyond that perfect situation, it then becomes a sea of variables that involve what action the audience has most recently taken (or not taken) and the price point. Again, this is the ideal environment for AI because it is constantly evaluating every possible permutation of price and attributes for each transaction. In terms of both customer experience with marketing overall, as well as the resulting benefits in performance, some of the most important efficiencies created by AI happen in cross-channel execution.

Most buying or optimization point solutions are very good at making effective and efficient performance decisions for their designed purpose (i.e. the channel that they are deployed on). However, there are numerous salient data streams coming from other channels running parallel to that decision engine. Each point solution is making decisions based on what is best for that medium, failing to account for the other interactions with the same audiences that are happening across a multiverse of different media channels.

By contrast, a multichannel AI system will consistently seek to deliver the ideal sequence of messages to any audience based on the sum of all data points collected across all channels. AI systems consider content, context, price point, placement, competition, and any other useful datapoint over any given amount of time to create the optimal campaign at the optimum efficiency and scale. This is directly linked to its ability to instantly process and utilize any element of informative data about consumer behavior or interaction across all media: paid, earned, and owned.

Conclusion

Digital marketing still requires the coordination of many different technologies in order to effectively reach audiences across markets and channels. But it should not require dozens of intermediary tools and vendors/agencies that only further complicate the respective tasks that marketers are expected to manage. The artificial intelligence reduces the company's issues by replacing, consolidating, and automating many of these channel- and device-specific systems.

The ultimate result of this leaner, smarter tech stack isn't just reduced costs, but more time for marketers to focus on the creative material that will draw users to the brand. Marketers must abandon the mindset that their employees have to spend their time watching over technology rather than focusing on messaging and branding, especially as more channels are added to their brand's repertoire. Today's consumers demand more personal, more creative marketing than ever, and AI offers marketers the time and money they need to deliver it - all they need to know now is how to deploy it.

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