



YOU
THOUGHT
YOU'D
FIGURED IT
ALL OUT.

A stylized illustration of a person with dark hair, wearing a blue and purple long-sleeved shirt and dark pants, sitting on the words 'YOU'D FIGURED IT' of the large 3D text. The person is holding a pink smartphone. The background is dark blue with some light blue dots.

Your job. Your department. Your career path. You'd paid your dues, maxed out your skills, and decided that the only challenge left was a manager running on low caffeine. You were even comfortable enough to switch to autopilot and go AFK.

But then (When? In the past decade? Year? Month?) AI tore onto the scene and flipped the game mechanics on their head. And thanks to a combination of improved computing power, cheap data storage and an unprecedented availability of data from all corners, it's poised to reshape our working world.

Take a step back. Breathe. There's no big boss fight on the horizon. While popular culture and some scientists—we're looking at you [Stephen Hawking](#) and [Elon Musk](#)—warn of future robot overlords, the reality is much more... complementary.

According to a recent McKinsey report, just 5 percent of jobs are completely automatable, while most others will only see about a third of their functions usurped by machines. Tasks like booking flights, answering frequently asked questions, monitoring social media feeds and tagging creative assets are likely to be turned over to AI, allowing humans to leap to the next level.

But let's not get ahead of ourselves; change is already happening. GumGum surveyed more than 400 marketing and advertising executives to find out where AI is being applied now, which departments are well-versed in the technology and how it could reshape those roles in the next two to five years.

So strap on those headphones, power up your console and get ready Player One. Automation is about to make your job much more interesting.



Choose a world to jump into and learn how AI is changing the game.

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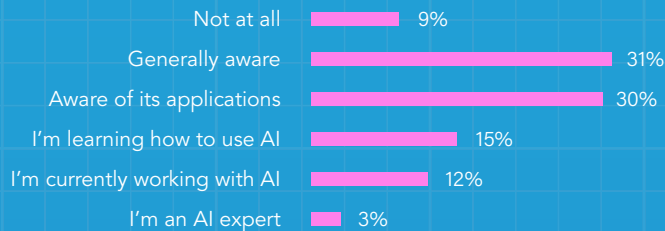
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OPERATING MANUAL

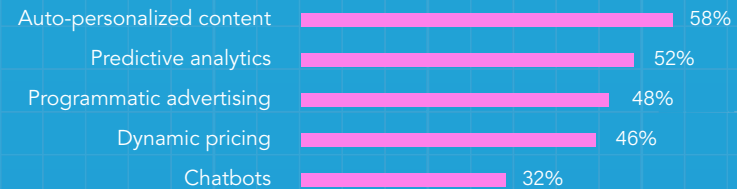
Before we get started, let's get the lay of the land. While most executives confessed a modest understanding of AI, they also reported that their companies are already using a wide array of technology that can incorporate AI, including programmatic advertising, personalized content recommendations, predictive analytics and more.

HOW FAMILIAR ARE YOU WITH AI-POWERED TECHNOLOGY?

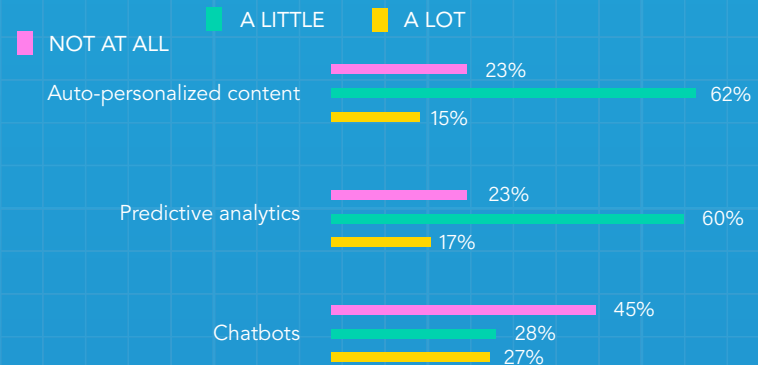


Those technologies are also very likely to be used next year and at the rate technology companies are integrating AI into their services, more marketing and advertising executives are likely to be using AI in 2018, even if they don't realize it.

IN THE NEXT YEAR, DOES YOUR COMPANY PLAN ON USING ANY OF THE FOLLOWING TECHNOLOGIES?

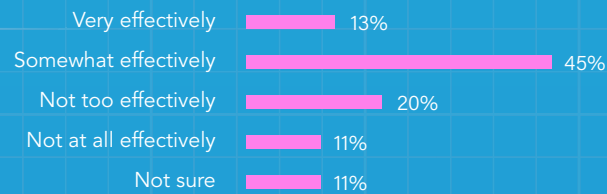


HOW MUCH IS YOUR COMPANY CURRENTLY USING THE FOLLOWING TECHNOLOGIES?



OPERATING MANUAL

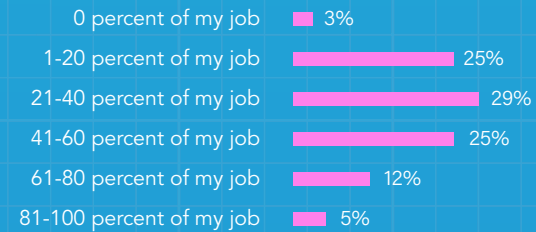
HOW EFFECTIVELY IS YOUR COMPANY CURRENTLY APPLYING AI TO THE DAY-TO-DAY WORK AND OPERATIONS?



WHAT WOULD MOST HELP YOU AND YOUR COMPANY WORK BETTER WITH AI-POWERED TECHNOLOGIES?



CURRENTLY, ABOUT HOW MUCH OF YOUR JOB'S OUTPUT INVOLVES DATA ANALYTICS?



What's standing in the way of better awareness of AI's potential? Companies that are ramping up their practice are doing so only "somewhat effectively," according to most respondents. They also said that better planning and training would improve what they get out of that tech. Luckily for them, most also reported that training is either available or planned.

Now that you know where AI stands in the industry, find out where you stand and what you need to do to level up.

WHO'S AFRAID OF THE BIG BAD BOT?

Just a fraction of media and marketing executives surveyed—about 14 percent—said they were most worried about losing their job to the imminent AI wave. Embracing a very human fear of the unknown, those who reported that concern also said they were less familiar with AI in theory and in practice—17 percent said they didn't know anything about AI and only 5 percent said they were learning to work with it.



WHAT IS ARTIFICIAL INTELLIGENCE?

Computer systems designed to perform tasks usually requiring some form of human intelligence. The specifics depend on each situation, as we'll soon see.

THE MARKETER

Inspired by creative excellence, but driven to prove ROI, marketers keep on top of every touch-point, campaign and technical advancement in order to make the wisest judgments. In exchange for that breadth, they sometimes sacrifice depth of knowledge, leaving that to their trusted agency partners.



THE MEDIA EXECUTIVE

Known for their reach, accuracy and powers of segmentation, media executives are most vulnerable to AI that can crunch data faster and more accurately than any human. They are girded, however, by their analytical prowess and translation capabilities. Likeability and the ability to weave data into a colorful story can put them ahead with clients.



THE CREATIVE

Buoyed by their impressive egos, creatives perceive themselves to be invulnerable to AI. In fact, they take their inspiration from it. Their ability to see potential creative applications for the new tech, while harnessing its powers to plow through rote tasks with algorithmic speed, puts them on solid footing.



WE AIN'T AFRAID OF NO BIG BAD BOT

Broadly, though, most industry executives have at least a passing familiarity with AI. About 15 percent said they are learning how to use it and 12 percent said they are working with it regularly. Only 3 percent claimed to be experts.

Where you sit among your peers—and what skills and characteristics you'll need to advance—has everything to do with the role you choose.

THE STRATEGIST

The industry's great thinkers are empowered by their already burgeoning communion with the machines. Rather than have their power of foresight undermined by predictive analytics and cognitive computing, strategists see AI as setting a stronger groundwork for their plans.



THE UX BUILDER

AI gives these world-builders more material to work with than they've ever had before. Their deep expertise, fluency with emerging APIs and eagerness to explore new tech give them an edge. To ensure their creations' success, however, they'll have to learn to work more closely with data and creative teams.



THE SELLER

At once the great hunter and the gentle nurturer, sales and customer service are two sides of the same coin. Ego and empathy are their greatest strengths; the very human desires to achieve and understand makes these marketers indispensable even in the face of the dreaded exchange.



THE MARKETER

Marketers who had braced for the impact of an AI revolution can unbuckle their seat belts, at least for now. Whether they know it or not, these decision makers are already using AI in off-the-shelf products that “put a play button on AI,” said Thomas Prommer, global head of technology at Huge. “A great example of that is programmatic advertising.”



THE IMPACT:

Ninety percent of marketers surveyed reported using programmatic advertising, [a tech segment that's on fire for AI this year](#). Programmatic advertising uses AI to gather user information for "dynamic creative" applications, which make sure ads are demographically and contextually aligned.

Several technologies enable this on the backend: Visual intelligence identifies, sorts and tags images; sentiment analysis AI powers social listening; even more traditional technologies like search engines use AI to understand and parse natural language queries.

THE EVOLUTION:

Marketing departments are just starting down a long path, adding roles that harness and clarify AI's potential. Fifty-one percent of respondents said their organizations had added such roles, primarily in data science and UX. While data scientists are in short supply, they'll be increasingly important as marketers lay AI's foundation.

"What it typically requires is relatively custom solutions where you start building that central data hub and, typically, it's a data management platform that pulls from all these different data lakes, correlated and put into a format where you now can feed it to artificial intelligence systems," explained Huge's Prommer.

DATA LAKES

Unfortunately, particularly within large organizations, unifying that data can be a diplomatic undertaking. "Sometimes it's literally you work for a company that is a little old school in the way their IT infrastructure is set up, and it's, 'Oh, well I have to talk to Maribeth and she sits over in building C, and I don't ever really work with her,'" said Jason Jercinovic, global head of marketing innovation at Havas Cognitive.

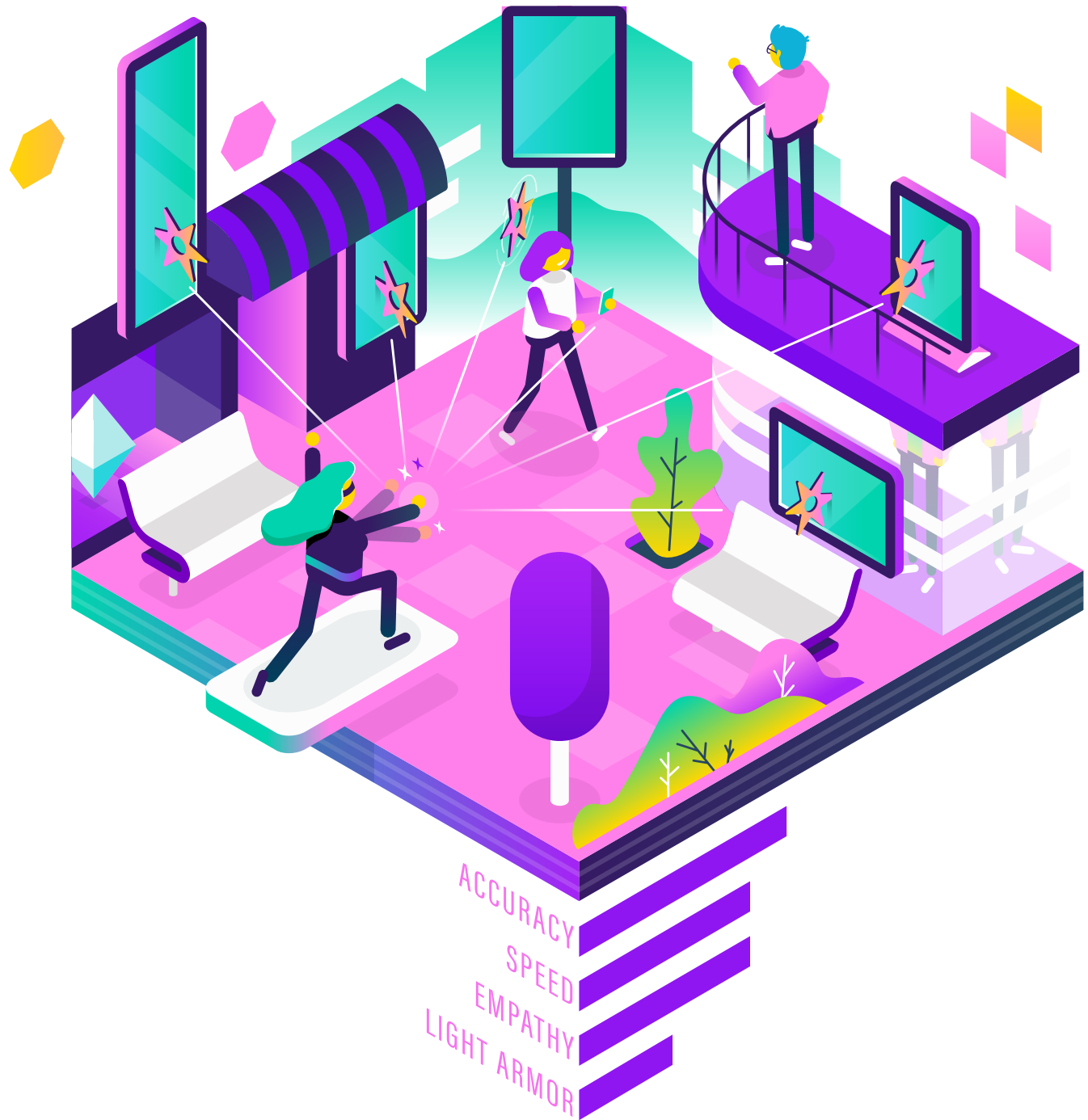
In those cases, marketers will need to bridge the gap between their camp and their Chief Information Officers. "We've seen the growth of this technology-forward CMO, but old-school CIOs are more about 'don't change anything. I got it working,'" Jercinovic said. Only in-house data science and engineering teams, coupled with airtight data security can calm those nerves.

Or you could just let your agency do it.

THE MEDIA EXECUTIVE

If news coverage is any indication, media agencies (and executives) are most vulnerable to the coming AI wave. In May, Dole said it was testing a media planning robot called "Albert" that it could program against brand-specific KPIs to buy social media. And Dole is not alone. Cosabella replaced its agency with an algorithm.

"There's this thing called the three Ds," said Thomas Kelshaw, director of innovation at IPG's Maxus. "Dull, dirty and dangerous. Jobs that are made for robots. I would add a fourth D—data."



THE IMPACT:

Media executives, more than any other discipline, are mired in data. Ninety percent of agency executives reported that at least one-fifth of their output involved data analytics—i.e., reports. Compare that to just 54 percent of brands and publishers. “At a media agency, half of what we do after buying the media is checking that it’s running and reporting on if its working,” said Thomas Kelshaw at Maxus.

“That’s a really bad job for a human to do because it’s very data intensive. You’re crunching and correlating numbers. With a bit of training AI and computers are way better at doing that.” The good news: This will go a long way in augmenting the accuracy of media buyers and planners everywhere.

Unfortunately, those soon-to-be-automated reporting jobs are often where junior executives cut their teeth.



THE EVOLUTION:

So where will aspiring media pros grind out their experience? “Perhaps the solution is in getting trainees to become the trainers of the robots...you have an AI buddy that you learn with and are correcting and improving. Even with deep learning, nothing beats a human saying, ‘Do this a little better this time.’”

Allowing AI (and their young human supervisors) to focus on the “how” and “when” tasks frees other media execs to answer the “why.” “You need someone that can look at the root cause,” said Kelshaw. “A bit more of a true analysis rather than just data crunching.” Sure, AI can collect data on social media sentiment, but it takes a human analyst with empathy to understand why people are feeling that way.

So media agencies will step in to fulfill more of those functions beyond the scope of AI, such as insightful analysis and truly understanding motivations and behaviors.

There is one more role computers can’t take, Kelshaw said: scapegoat. “The robots at Google, Amazon, Facebook, Salesforce? You can’t fire them. If you’re a client looking around for someone to blame, pretty scary if you don’t have an agency. Agencies might just survive longer than people think because we provide that buffer. We can be held for a review.”

THE CREATIVE

AI will never replace the spirit that breathes soul and wit into everything from feature films to search engine copy: the creative mind. Right?

Not exactly.

Last year, IBM made headlines when its cognitive computing platform, Watson, cobbled together a movie trailer for the film Morgan. To train it, the platform processed more than 100 horror flicks, then highlighted six minutes' worth of scenes for the trailer.

But the machine couldn't stick the landing on its own. A human edited those clips together. That's the pattern we'll see for now: machines cutting down production time—in this case from 30 days to 10 hours—while humans add narrative arc and emotional depth.



THE IMPACT:

AI can eliminate many rote tasks like finding, cropping and tagging assets, said Hugué's Prommer: "Vision-based AI products can now analyze and recognize hot spots in an image and produce cropped versions accordingly with minimal human supervision." Meanwhile, AI-enhanced products identify and sort those images into a media library. "So now, you have a team of production designers that can focus on much more creative and valuable tasks."

One place creatives are already stepping up is data analysis. About 47 percent reported that they are already working with data in a significant way, putting the discipline ahead of most people's expectations.



THE EVOLUTION:

Of course, it's not all about visuals and efficiency. Consider last year's media hit—the chatbot. (About 57 percent of creatives reported using this AI tactic "a lot," compared with 27 percent of brand marketers.) One of AI's biggest challenges is parsing (and responding in) natural language. To compensate, copywriters, comedians, and magazine editors are being called on to breathe life into chatbots by developing characters and writing scripts.

"Do a better job of storytelling by bringing in a different kind of writer," advised Max Fresen, co-founder of the self-proclaimed first AI agency, MDC's BornAI. "Someone who's more accustomed to writing for video games or writing for movie scripts. Someone that understands how to anticipate what someone might say and how to craft responses."

"Interactive scriptwriting is a new profession," Seth Greenfield, co-founder of Imperson, a studio that creates "conversational bots for brands" for characters like Miss Piggy and Doc Brown for Disney and Universal. "It's being born at this point. This will be taught at universities in the next five years."

THE STRATEGIST

If media planners are concerned with measuring outcomes, strategists are the ones who divine how to get there. In this regard, faster access to more information seems to be an unadulterated plus. "You're not going to replace a strategist, you're going to augment them," said Kelshaw.



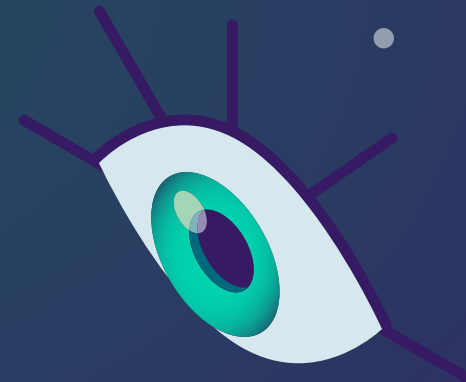
THE IMPACT:

Forty-two percent of respondents said AI had provided the best return in predictive analytics—the ability to process past data and indicate what is likely to occur in the future, based on that data. Strategists are not as optimistic about AI's impact on their discipline: Only 10 percent of strategists said their department benefitted most from its application; most pointed to media. But for all their foresight, they may not yet see the full picture.

Strategists, who pride themselves on asking all the right questions before setting their course, will certainly find a friend in AI. "They'll have on demand some modeling capability with AI," said Kelshaw. "Like financial modeling on Wall Street, strategist could say, 'Run me every single model based on all of the data we have and show me why this strategy will or won't work.'"

THE EVOLUTION:

Statistics and data modeling will be important skills for strategists to master, as will interpreting the results of those models. And while cognitive computers do make some recommendations, strategists will be on deck to make the right call and, just as importantly, sell it to the clients. After all, few would blindly trust a strategy coldly delivered by a robot.



THE UX BUILDER

As a discipline, user experience was once thought of as a step in the process: the team that built the taxonomies, wire frames and navigation systems, then handed it off to a creative team who made it beautiful.

“They went from designing for a desktop computer to mobile, to mobile first and now voice,” said Marc Maleh, general manager of Havas Cognitive. But UX has been a step ahead the whole way. Product engineers, data scientists and T-shaped thinkers of all kinds are welcomed onto UX teams, because it has become such a collaborative process.

And having a keen awareness of web environments doesn't hurt.



THE IMPACT:

Our survey revealed that UX teams are among the most AI-savvy in the business. Six percent said they were expert at AI and 56 percent said they were working substantially with chatbots. "UXers tend to be the ones who are already the most fluid, and they take it as a given that things are going to change," said Mark Blanchard, global head of experience design at Havas Cognitive.

Fluidity is a key characteristic for teams breaking new ground. "You have uncertainty about the process, the method, the technology, the tools, sometimes you even have uncertainty about the business goals," he said. "We need people who have the empathy and the curiosity to talk to other disciplines, ask the right questions and find common ground."



THE EVOLUTION:

On a practical level, UX designers must stay abreast of the new AI-backed building blocks available, mainly through APIs, he said.

One computer vision API Blanchard recently discovered can recognize any car built in the US since the year 2000 based on a photograph. It's a capability any UX designer with a car insurance client would love to know about. "Right now, you have to fill out this fairly complex web form that is asking all these things," he said. But a UX designer that integrates this Visual AI into a car insurance app makes that process so much easier for their customers. "Now, you can just point your camera at your car, and you're done."

Since there is no ethics handbook for AI, UX designers have to exercise tremendous sensitivity when considering their customers, something machines are not programmed to do. Most marketers would agree that it's fine for AI to analyze consumers' public Twitter feeds to see which adventurous users should get an SUV ad. But a liquor brand looking for depressed people who want to drown their sorrows? "No, that sucks," said Blanchard.

It looks like UX is maturing into the big man on campus. "There's finally a realization at agencies that a brand is best experienced through something you do, versus something you consume."

THE SELLER

Could there be a more human-to-human occupation than sales and customer service? A machine can't look you in the eye, project confidence in a recommendation, engender trust and close on a strong handshake. Or can it?



THE IMPACT:

From our Netflix recommendations to our Spotify playlists and Amazon product suggestions, algorithms already predict and inform the entertainment and products we consume. Data-driven recommendations are ingrained in mainstream consumer culture.

And yet, paradoxically, the path forward for AI seems to be to make sales and customer service even more human. Unlike programmatic sales, which aims to automate the sales process to the largest extent possible, platforms like Digital Genius, Salesforce and Affiniti are elevating the role people take when dealing with customers.



THE EVOLUTION:

Those platforms use AI to analyze and predict client journeys, pinging human agents when a customer needs their attention. Salesforce's Einstein allows salespeople to swoop in at the most opportune moment to provide client counsel, relieve concerns or make a sale.

Meanwhile, AI-backed customer service platform Afiniti optimizes not through automation, but by analyzing customer behavior through interaction data, purchase information and social media analysis. From there, the platform uses AI to pair the customer with someone they are more likely to click with, rather than just handing their call to the next free agent.

"It is exactly the same way when you're in a restaurant, and there are some servers that you maybe have a great rapport with, who really enjoy a conversation with, whatever. We try and do that for business, to help them better serve and have better interaction with their customers," said Chris Farmer, Afiniti's Chief Marketing Officer.

That human touch, he said, improves customer retention by four to seven percent, all based on human interaction.

Take that, chatbots.



So there you have it. No big boss battles, just a whole lot of levelling up. And, for the most part, it will require us to lean into the very things that distinguish us from the machines: strategy and emotion.

On one side, we'll be great thinkers, interpreting predictions and recommendations, setting the course and directing our AI assistants to run the experiments we need to uncover more information. On the other side, we'll be nurturers: empathizing with clients, identifying with customers, selling through grand strategies with confidence and charisma.

For marketers and advertising executives who want to excel in the AI world order, the path forward will be developing skills that complement our new, robot co-workers, not conquer them.



Looking for what's new in artificial intelligence, with a little
tech pop culture to make the medicine go down?

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