



AI

AI for marketing:
human ingenuity amplified



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The future of AI is still an unfolding story. But as the legendary computer pioneer Alan Kay once said, “The best way to predict the future is to invent it.” As the first generation to live with AI, that is exactly what we will do. All around the world, Microsoft’s AI team is working to fulfill our mission — to empower every person and every organization on the planet to achieve more.”

– **Harry Shum**, Executive Vice President,
Microsoft AI and Research Group



AI is everywhere



AI is everywhere

Over the past few years, there has been a lot of buzz surrounding artificial intelligence (AI) and its potential impact on the way people interact and the way businesses operate. Although AI itself is still at a nascent stage, we believe that we're embarking on an exciting new era. In the book, *The Future Computed*, our vision of the present and future of AI is clear:

“Thanks to advances in the past few years, we’re beginning to build systems that can perceive, learn and reason, and on this basis, can make predictions or recommendations. Nearly every field of human endeavor could benefit from AI systems designed to complement human intelligence. From preventing once-deadly diseases, to enabling people with disabilities to participate more fully in society, to creating more sustainable ways to use the earth’s scarce resources, AI promises a better future for all.

The idea isn’t to replace people with machines, but to supplement human capabilities with the unmatched ability of AI to analyze huge amounts of data and find patterns that would otherwise be impossible to detect.

We aim to develop AI in order to augment human abilities, especially humankind’s innate ingenuity. We want to combine the capabilities of computers with human capabilities to enable people to achieve more.”

Where we are today — and where we see AI going — aligns with the perspectives of John McCarthy, who coined the term “artificial intelligence” in 1954. He observed that “as soon as it works, no one calls it AI anymore.” AI is becoming so embedded in our lifestyles that we don’t even realize it is there. For instance, if you click on posts from a friend in Facebook’s News Feed, an algorithm will “learn” that you like that person’s posts and publish them more frequently and higher up on your feed.

Of course, Facebook’s News Feed is just one example of the many ways we experience and interact with AI on a daily basis. Netflix’s recommendation engine and credit card fraud detection services are some others. Even voice-based assistants like Amazon’s Alexa, Apple’s Siri and Microsoft’s Cortana are becoming household fixtures. In our minds, they’re not considered the technological marvels that they are; they’re simply a part of our lives.

Meanwhile, other AI applications — robotics, facial recognition and self-driving cars — are still years from reaching their full potential, but many consumers are thrilled about the possibilities. In fact, 63% of American consumers believe that AI will one day solve complex problems like cancer and climate change, according to a PwC survey.¹ That hope is grounded in real advances that are improving human lives.

1. “Bot.Me: A revolutionary partnership,” PwC, 2017.

For instance, [SeeingAI](#) helps visually impaired people “see” by using voice to describe their surroundings. [Inner Eye](#) helps oncologists and radiologists offer better, more efficient care to cancer patients. Microsoft’s [AI for the Earth](#) seeks to address climate change.

In the marketing world, however, many are still tentative about AI, unclear about how it will help them be more efficient and effective at their jobs. A recent survey of American companies found that 68% of marketers were not using AI in any way.² A Narrative Science survey polled U.S. business executives who have already embraced AI-based solutions, and while adoption is still low, it is beginning to improve. Respondents reported that among their most widely used AI-powered solutions were machine learning (22%), voice recognition and response (14%), and virtual personal assistants (12%).³ Industries like retail are beginning to make traction. According to a survey of U.S. and UK retailers, more than a quarter of marketers are using AI in their advertising efforts and 13% are using it to power chatbots.⁴

At its core, AI empowers marketers to deepen consumer connections and personalize communications. It helps marketers make sense of big data and, in turn, personalize experiences and interact with consumers in smarter ways. It even helps marketers use data to predict future actions so they can automate copy development and campaign execution. The end result doesn’t take away from the marketers’ power, but augments it. Rather than focusing on minute operational tasks, marketers can instead focus on experimenting with new campaign tactics and researching innovative touchpoints.

Despite its potential benefits, there are common misbeliefs and knowledge gaps around what AI is. There are misconceptions around how it can benefit consumers and organizations alike. Most of all, there are many questions around getting started and how brands can truly put AI into action. If you’re struggling to separate the hype and promise of AI from its on-the-ground reality, this guide is for you.

What exactly is AI?

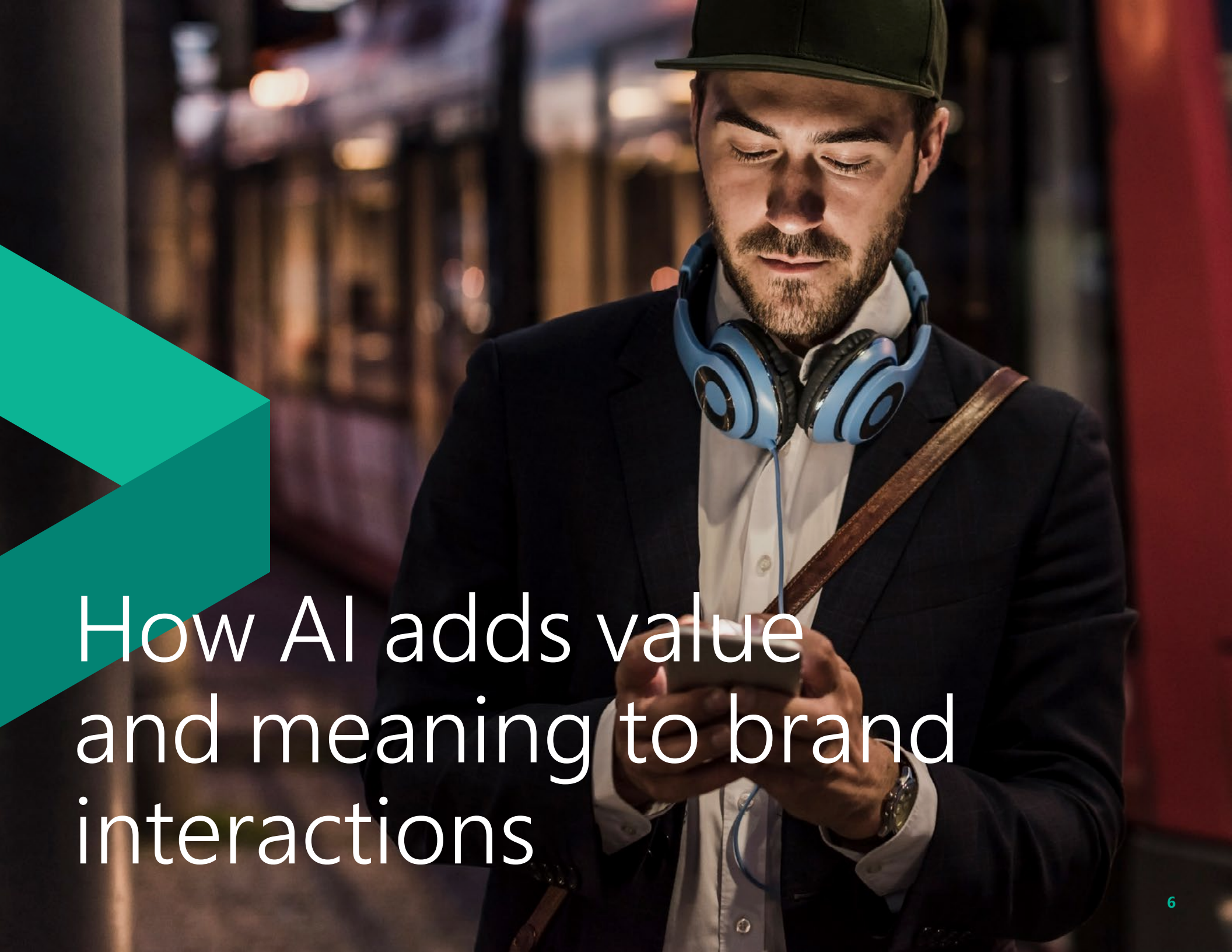
In the words of Microsoft CEO Satya Nadella in his book *Hit Refresh*, AI is technology that can perceive, learn, reason, assist in decision-making, and act to help us solve problems. He explains:

“AI today is some ways away from becoming what’s known as artificial general intelligence (AGI), the point at which a computer matches or even surpasses human intellectual capabilities. Like human intelligence, artificial intelligence can be categorized by layer. The bottom layer is simple pattern recognition. The middle layer is perception, sensing more and more complex scenes. It’s estimated that 99% of human perception is through speech and vision. Finally, the highest level of intelligence is cognition — deep understanding of human language. These are the building blocks of AI, and for many years Microsoft has invested in advancing each of these tiers — statistical machine learning tools to make sense of data and recognize patterns; computers that can see, hear, and move, and even begin to learn and understand human language.”

2. “Survey: Artificial Intelligence, The Results,” icuc.social, July 19, 2017.

3. “Outlook on Artificial Intelligence in the Enterprise 2018,” Narrative Science, 2018.

4. “2017 Digital Retail Innovation Report,” Sailthru, 2017.



How AI adds value and meaning to brand interactions

How AI adds value and meaning to brand interactions

As humans, we take for granted our innate ability to see, hear, understand and predict. New developments in machine learning and deep learning have given machines these same capacities, allowing them to recognize speech, language and objects. As a result, AI-powered devices and tools have the ability to make consumers' and marketers' lives more valuable and meaningful in the following ways:

	Marketers	Consumers
Connect	<p>Marketers can interact with consumers using more natural and emotive methods. They can create more personalized experiences across channels. For instance, chatbots use natural language processing to talk to consumers. Customer service remains an Achilles' heel for many brands. A chatbot can resolve up to 82% of consumer interactions without using a human representative.⁵</p>	<p>Consumers, in turn, will have more intimate and relevant interactions with brands. They can receive helpful information and even products when they're needed most. For instance, a digital assistant will be able to access a busy executive's calendar and ask if he wants to make a lunch reservation. Or, a digital assistant can ask a new mom if she wants to purchase more diapers and wipes as she's working on her shopping list.</p>
Personalize	<p>Marketers can use consumer inputs based in text, speech and gesture that weren't available before. Such signals can be combined with other data, like location. Using those inputs, a marketer can craft an apropos message with dynamic creative. For instance, British home improvement chain B&Q has run an outdoor ad that changes based on the weather. On a sunny day, it asks passers-by if their gardens are summer ready. In 2015, Microsoft also released an app called How-Old that uses facial recognition to guess a user's age based on their photo. Modiface's augmented reality tech also helps beauty brands suggest the right types of makeup to wear.</p>	<p>Consumers will enjoy more personalized experiences and receive more relevant and accurate recommendations. Music-streaming service Spotify does this for music suggestions. Amazon has also used consumers' past searches and purchases to create curated recommendations. AI systems constantly search on a consumer's behalf. Those systems learn preferences to ensure that consumers have the best experience possible. We call this personalization at scale.</p>
Automate	<p>Marketers can mine huge data volumes and use machine learning to unlock insights and find predictive signals. This helps improve decision-making and optimize investments and strategies. Such data can come from wearables, connected cars, smart home appliances and more. The information helps marketers better understand consumer behavior and intent across the decision journey. This data can help take the guesswork out of keyword bidding, ad testing and optimization, and even email campaign creation.</p>	<p>Consumers can benefit from not having to see ads designed for someone else. Up to 71% of U.S. consumers say they would prefer to see targeted ads and AI positions marketers for success.⁶</p>

5. "[Chatbots in Customer Service](#)," Accenture, 2016.

6. "[71% of Consumers Prefer Personalized Ads](#)," Adlucent, May 12, 2016.



Forging stronger
customer relationships
with AI-powered devices

Connect

Forging stronger customer relationships with AI-powered devices

Marketers face a more complex environment than ever before. The average U.S. consumer now owns 7.2 connected devices.⁷ Gartner predicts that by 2020, there will be some 20 billion connected “things” in the world.⁸ As more consumers turn to ad blockers and ad-free mediums like streaming services, marketers will need to shift from being interruptive to helpful. Messaging that’s very well targeted can fit the bill because it aids a consumer’s journey to purchase. Marketers can also help remind consumers of tasks and make relevant suggestions. Here are a few ways that AI helps marketers achieve this:

SEARCH

More Internet-connected devices are entering the market — and consumers’ homes. This is making search a pervasive tool powering personalized experiences and interactions. Data acquired from voice, text and image searches are fueling chatbots and personal assistants. AI only works if it is able to access a large amount of data. Search provides data that is constantly updated and offers a window into human thought. Search also keeps improving. Bing now is able to [recognize objects in images](#). This lets it parse text and extract meaning from images.

Lessons learned: Search data can power marketing strategies in advanced ways. Marketers can use this data to better understand customer behaviors and preferences — and even predict future actions — so they can better tailor campaigns, product launches and engagement initiatives.

BOTS

Bots are more integrated throughout the customer journey and are becoming more sophisticated. For instance, a chatbot from beauty brand Kiehl’s lets consumers search products by skin type or ingredients. By asking the consumer questions, the bot is able to make product recommendations. It also simulates a real [Kiehl’s](#) employee by maintaining a friendly, playful tone. There is liberal use of emojis in the communications, for instance. Such conversations also deliver data that is useful for future marketing outreach. Bots can also be used to handle customer queries, which helps streamline service efficiencies, improve resolution times and allow service employees to focus more on high-touch engagements and complex customer issues.

Lessons learned: Bots are no longer just gimmicks. They have acquired a high intelligence (IQ) and emotional intelligence (EQ), making them more valuable and trustworthy in consumers’ eyes. In fact, consumers are receptive to bots as long as they

provide a legitimate benefit. One recent U.S.-based survey showed 40% of Millennials interact with bots daily.⁹ Brands can integrate into touchpoints like e-commerce sites, mobile apps and social accounts.

DIGITAL ASSISTANTS


Voice-based assistants Cortana, Alexa and Siri show how AI interaction can enhance daily life. They provide intelligence that powers consumers’ days — whether it’s the weather forecast or the traffic update for a morning commute. With permission, digital assistants collect valuable data from searches, location, email and more. They can even engage with bots, helping users schedule flights and reserve hotel rooms.

Lessons learned: Many consumers are used to speaking to their devices instead of typing in commands. In 2016, some 25% of Bing’s searches were voice-based. That’s why marketers need to provide more useful services via voice. Many are moving in this direction. AI-based personal assistants like [x.ai’s Amy and Andrew](#) schedule meetings via email for users.

7. “ADI: Lack of Device Data Hampers Marketers’ CX Resolution,” CMO, March 22, 2016.

8. “Gartner Says 8.4 Billion Connected ‘Things’ Will Be in Use in 2017, Up 31 Percent From 2016,” Gartner, February 7, 2017.

9. “3C Releases Chatbot Progress Report, Showing Consumer Usage and Preferences When Using Chatbots from a Brand,” 3Cinteractive, July 18, 2017.



Embracing AI to improve
marketing relevance
and performance

By 2020, companies who effectively master AI will steal
\$1.2 trillion per year from those that don't.

– Forrester¹⁰

Personalize and Automate

Embracing AI to improve marketing relevance and performance

Like electricity, AI is becoming ever-present in our lives. On a personal level, it is making technology smarter and more aligned to our day-to-day wants, needs and behaviors. For marketers, AI is providing new and intelligent tools that enrich interactions, improve efficiencies and craft more successful campaigns.

AI helps you better understand customers:

Bing's Audience Intelligence Graph gives marketers context data that helps them refine their communications. The platform uses consumer data to better understand user attributes and intentions. Intelligence from the Microsoft Productivity Suite feeds into the Microsoft Audience Intelligence Graph. That data helps marketers better understand and reach customers. [Cortana Intelligence](#) and [Bing Predicts](#)

can improve forecasting and get more insights on ad campaigns. It can also help marketers gauge the reception of their products.

AI helps you reach customers when it matters

most: AI helps marketers better understand consumer behaviors and intent across the buying journey. The end result: more personalized experiences for consumers and better results for marketers.

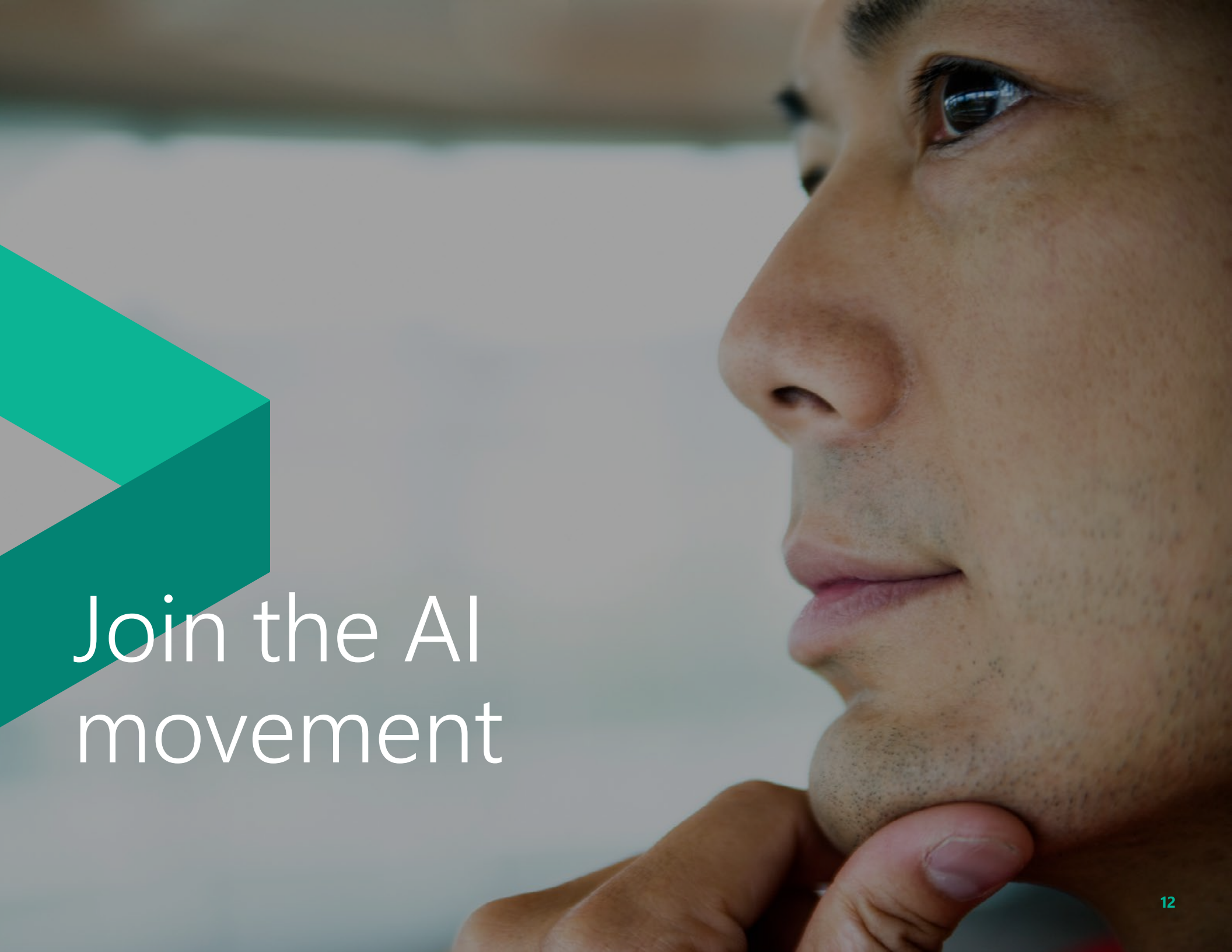
AI can help you create personalized experiences

at scale: AI lets marketers create hyper-relevant customer experiences. Imagine promoting products, offers and content based on consumers' past behaviors and preferences. The best part is, these experiences can be delivered automatically and in real time; there's no need for manual work or human intervention.

AI helps you optimize campaign performance:

Programmatic takes the grunt work out of advertising by automating. For instance, automated bidding manages bids in real time based on a wide set of useful platform signals. An opportunities tab within Bing alerts marketers to changes they could make to improve their return on ad spend (ROAS). The suggestions are based on predictive analysis from data crunching.

¹⁰. "Predictions 2017: Artificial Intelligence Will Drive the Insights Revolution" Forrester, November 2, 2016.



Join the AI
movement



Join the AI movement

AI has been around for decades. While it may seem intimidating, vast improvements in AI offer new opportunities to deepen customer relationships. New tools let marketers be more productive and successful in their jobs. And it's easier than ever for marketers to get started, especially with the right partner. Microsoft has been investing in AI technology since the company's inception. It is integrating AI across the organization — from Microsoft Knowledge Graph to Azure Cloud Computing, Cortana, Office, Skype and, of course, Bing. At Bing, AI underpins everything we do.

START ENGAGING



START BUILDING



START INNOVATING

Start engaging

- Invest in Bing Ads Intelligent Ad Solutions, including [Dynamic Search Ads](#) (U.S. and UK only) and [In-market Audiences](#) (U.S. only)
- Use the Bing Ads [auto-bidding](#) tool to optimize search campaign performance

Start building

- Create a bot using [Microsoft's Bot Framework](#)

Start innovating

- Continue to experiment with different campaign approaches and gather data to make smarter decisions
- Begin to optimize for voice search by [creating skills for Cortana](#)

AI is full of potential.
Are you ready to achieve more with AI?

SIGN-UP NOW



Bing Network. Intelligent search.

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