# Ai

# Artificial Intelligence Is Here - People Just Don't Realize It

## MIMI AN

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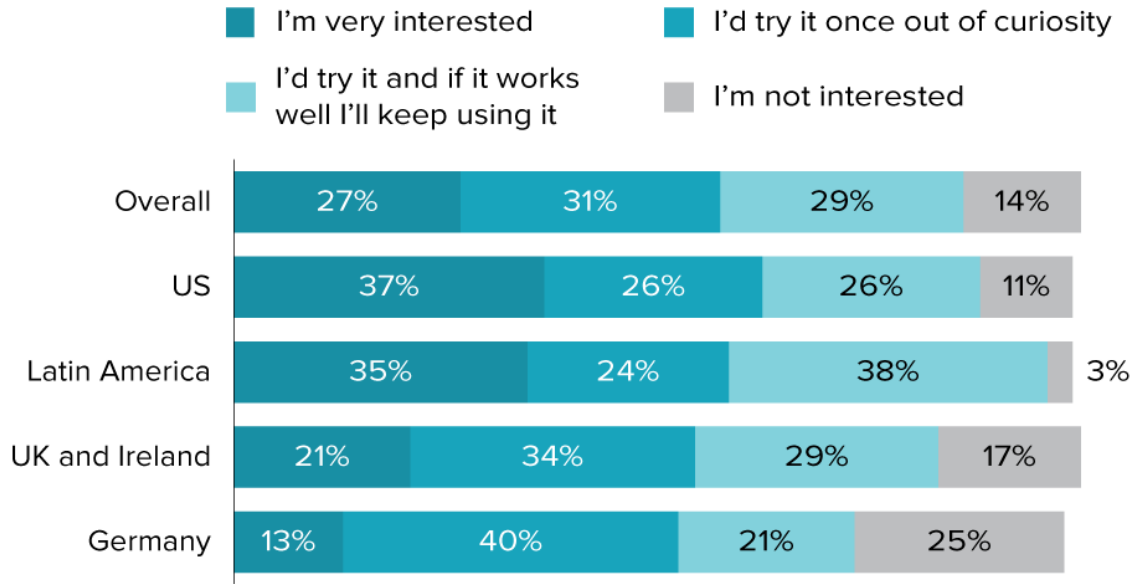*Click Chapter Titles to Go Directly to the Page*

# 01 /

## INTRODUCTION

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*TL:DR:* Artificial intelligence (AI) technologies are already widely used today – people just don't realize it. HubSpot surveyed over 1,400 consumers globally about AI and found that:

- 63% of people don't realize they're already using AI technologies

- Use of voice search has seriously increased, so SEO/SERP professionals need to take notice

- Consumers are comfortable buying from a bot that provides customized service

- People are very open to using AI-enabled bots for customer service, particularly for straightforward requests and questions.

AI technologies have captured the public imagination for decades (think HAL 9000, the Terminator, etc.), but many people don't realize that they are already using AI technologies every single day. Perhaps it's because we've been expecting to see a mind-blowing, sentient robot that talks and thinks like us. That may be reality in the future. But as of today, we're surrounded by a plethora of incredibly sophisticated artificial intelligence tools that are designed to make all facets of modern life easier. (To get a better understanding of artificial intelligence, check out our primer which breaks down the core technologies available today.)

For marketers, salespeople, and any professionals who operate online, these artificial intelligence tools have huge potential to improve their day-to-day functions, help them become more targeted and efficient in their day jobs, and allow their businesses to uncover customer trends that were impossible to sift through in the past. The possibilities are endless. And there's huge appetite among the general public to use AI tools: 86% are interested in trying them out. Businesses that tap into that interest early can differentiate themselves, especially with respect to customer service.

**Are you interested in interacting with artificial intelligence based tools?**

- I'm very interested
- I'd try it once out of curiosity
- I'd try it and if it works well I'll keep using it
- I'm not interested

| | I'm very interested | I'd try it once out of curiosity | I'd try it and if it works well I'll keep using it | I'm not interested |
|---|---|---|---|---|
| Overall | 27% | 31% | 29% | 14% |
| US | 37% | 26% | 26% | 11% |
| Latin America | 35% | 24% | 38% | 3% |
| UK and Ireland | 21% | 34% | 29% | 17% |
| Germany | 13% | 40% | 21% | 25% |

Base: Consumers in the US: 350, UKI: 307, Germany: 365, Latin America (Colombia + Mexico): 404
Source: HubSpot Global AI Survey, Q4 2016

This report will dive into three areas of AI technology innovation that will greatly impact the way consumers interact with businesses:

- Voice search
- E-commerce
- Customer service

We'll end with some present day product examples that speak to the breadth of AI's impact on modern life.

# 02 /

# THE STEADY GROWTH OF VOICE SEARCH

Search assistants like Siri, Alexa, and Cortana are powered by natural language processing and speech recognition programs, making them AI tools. Since Apple introduced Siri in 2011, voice search capabilities are available on the 3.9 billion Apple, Android, and Windows devices worldwide. Because of its ubiquity, voice search is one of the most established AI-enabled technologies today.

To get a sense of how people view AI today, our survey first focused on people's perception of AI. When asked, just 37% of our respondents said they'd used an AI tool. But, through follow-up questions, we found that 63% of respondents who said they didn't use AI technologies were actually using AI – they just didn't know voice search engines or programs like Siri are powered by AI. Thanks to simple, easy-to-use tools like voice search, AI has crept into widespread use without many realizing it.

# 63% already use AI tools without realizing it

Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

**Why This Matters To Businesses:** In 2011, when Apple first released Siri, many people snickered at its inability to understand seemingly simple questions and give correct answers – a reviewer for Mashable wrote at the time: "Siri works just barely well enough for Apple to pull it off". But in the years since, Apple, Google, Microsoft, Amazon, and countless other companies have released and refined their own voice-enabled AI assistants. People have noticed the improvements to Siri, Cortana, and Alexa and have regularly begun using them.

# 74% used voice search in the past month

Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

Our survey revealed 74% of all respondents have used voice search tools within the past month. We tracked daily usage of voice apps and found the rate of usage has increased a great deal just this year – since May daily use of voice search increased 27%. Why is that a big deal? This brisk change in search behavior worldwide has huge implications for SEO professionals whose job it is to make sure their business is found in the top of search results. As more people bypass the search screen by using voice search, the mechanics of search become completely different. Instead of a list of search options to choose from, the voice search tool gives only one option as a result and often with no attribution to the source of the result. This has significant impact on a small and growing business's ability to attract people to its website and establish its brand. However, voice search also enables businesses to be more discoverable in local searches, so marketers need to set up their website and content to appear when someone seeks a local business.

## How frequently do you use voice-enabled search engines a week?
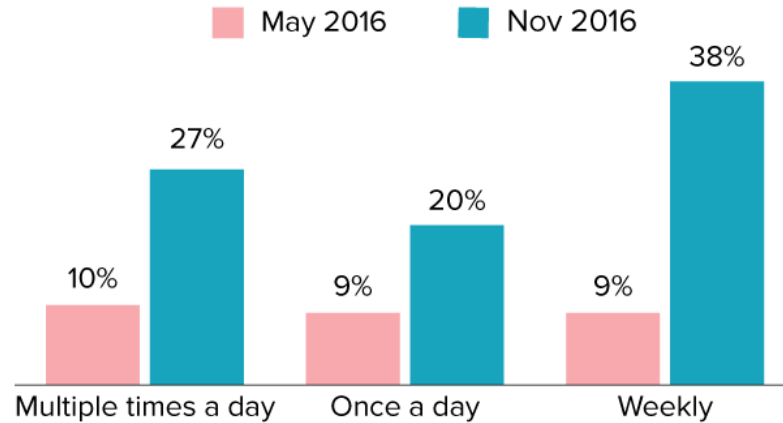
**May 2016** **Nov 2016**



November Base: 1,051 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia who have used voice search within the past month
May Base: 1275 consumers in the US, Canada, UKI, Germany, Australia, New Zealand, Singapore, Colombia, Mexico, and Brazil
Source: HubSpot Global AI Survey, Q4 2016

People are also much happier with the quality of voice search results compared to six months ago. Siri was released in 2011 and over the last five years, people have learned how to ask questions to get the right result. At the same time, Apple has steadily improved Siri's accuracy via machine learning. Now, the majority of people who use voice search are happy with the results.
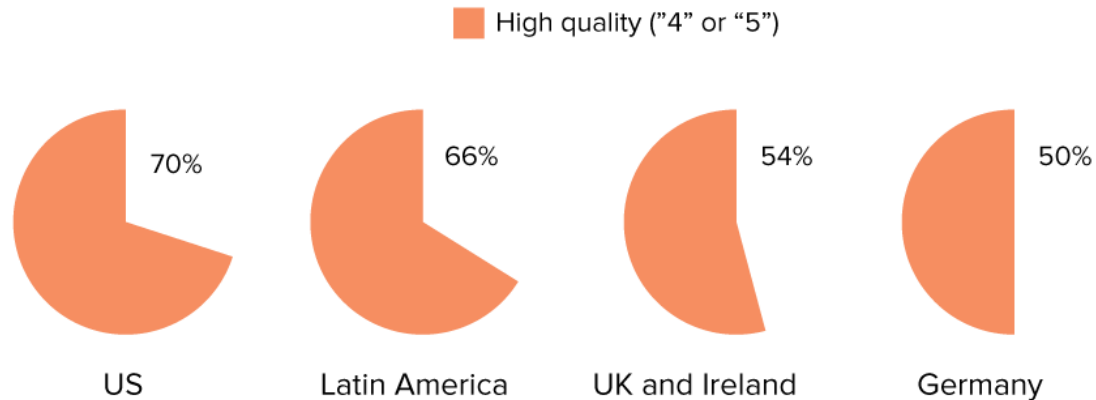
## How would you rate the quality of the results you get in your voice search?
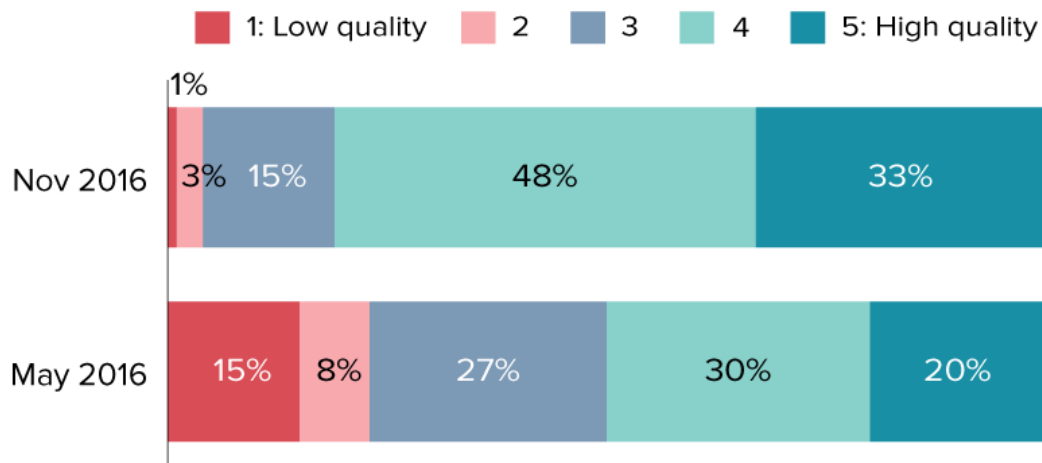
**1: Low quality** **2** **3** **4** **5: High quality**



November Base: 1,051 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia who have used voice search within the past month
May Base: 1275 consumers in the US, Canada, UKI, Germany, Australia, New Zealand, Singapore, Colombia, Mexico, and Brazil
Source: HubSpot Global AI Survey, Q4 2016

In our sample, German, British, and Irish respondents were least happy with their voice search results. This is likely due to voice recognition systems having trouble deciphering regional accents and general localization issues with the technology. We expect satisfaction will trend up as engineers improve their products to better analyze different languages, dialects, and accents.

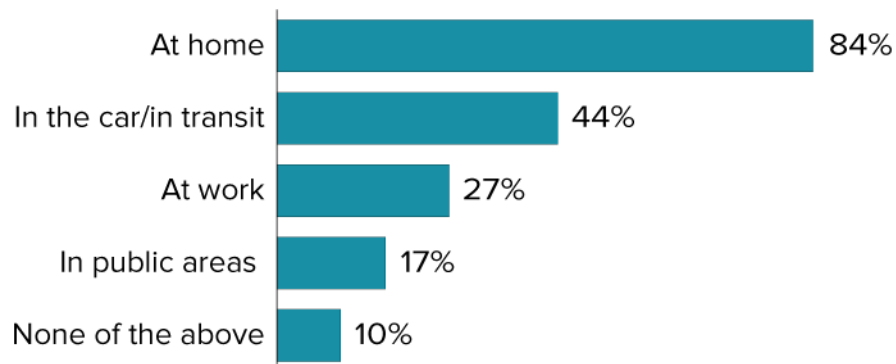**How would you rate the quality of the results you get in your voice search?**

High quality ("4" or "5")

| US | Latin America | UK and Ireland | Germany |
|---|---|---|---|
| 70% | 66% | 54% | 50% |

Base: Consumers that have used voice search in the US: 288, UKI: 229, Germany: 228, Latin America (Colombia + Mexico): 306
Source: HubSpot Global AI Survey, Q4 2016

Consumers' voice search behavior will directly impact the SEO priorities of B2C companies the most in the near future. That's because people prefer using voice search at home or in their car, where they're more likely to ask about personal topics rather than work-related topics. However, the taboo of asking questions out loud and in public will likely fade, just as people became accustomed to others talking on the phone via bluetooth headsets. Currently, 27% are comfortable using voice search at work, and 17% would use voice search in public areas.

## Few are comfortable using voice search in public

*Where are you comfortable asking questions out loud to search assistants like Siri?*

| | |
|---|---|
| At home | 84% |
| In the car/in transit | 44% |
| At work | 27% |
| In public areas | 17% |
| None of the above | 10% |

Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

# 03 /

# ECOMMERCE CHATBOTS

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One of the fastest growing use cases for AI technology is ecommerce capabilities integrated within chatbots. The idea is to allow people to buy items through a chatbot that can provide personalized purchase recommendations. In our survey, 47% of respondents are open to buying items using a chatbot.

## 47% would buy items from a chatbot

Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

Chatbots leverage natural language processing to communicate with a human. The chatbot processes a buyer's request and taps into machine learning to determine the best products or options to serve a user based on purchasing trends. If a buyer asks for snow boots, a bot can suggest the top-rated boots sold by the company. The bot can also recommend wool socks to go with the boots because it knows people who buy boots also purchase wool socks in past purchases.

In the example below, Sam browses products from GoSun Stove, chooses the product he wants, and purchases it directly via the chatbot. Using the bot, Sam's buying experience is simple, personalized, and seamless.



Over [4 billion people worldwide](#) actively use messaging apps. Chatbots typically sit natively on messaging applications, such as Slack, WhatsApp, Line, and Facebook Messenger. In line with our questions on chatbots, we wanted to know how comfortable consumers are with purchasing from a social network like Facebook instead of an ecommerce website. There's a slight barrier to entry in the mind of the consumer who typically associates Facebook as a place to stay in touch with friends rather than a place to buy items. The majority of respondents don't see social networks as a place for purchases ... yet. As social networks, especially Facebook, command more of people's time, there will be a natural enlargement of the sphere (see the uproar over Facebook's [foray into media](#), specifically [video](#) and [news](#)) and in time, people will become more comfortable with buying from brands through social media. It turns out, 37% would consider buying items on a social network instead of a company's website.

# 37% would buy items from Facebook

Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

**Why This Matters To Businesses:** With an ecommerce bot powered by AI, businesses can have an always-on salesperson that can interact with customers on a one-to-many basis. On top of 24/7 availability, a sales bot exists on the world's most popular social networks and messaging applications, making it ubiquitous. Ecommerce bots can offer personalized purchasing experiences to customers while expanding a business's reach. The easiest win is for B2C companies that sell consumer goods with a straightforward, repeatable selling cycle. There are many companies like Springbot that build ecommerce bots for businesses, so there's no need for individual companies to find a developer to build a homegrown system. As machine learning programs get smarter, it's likely that ecommerce bots will be able to field much more complicated questions from potential buyers and help sell bigger offerings.
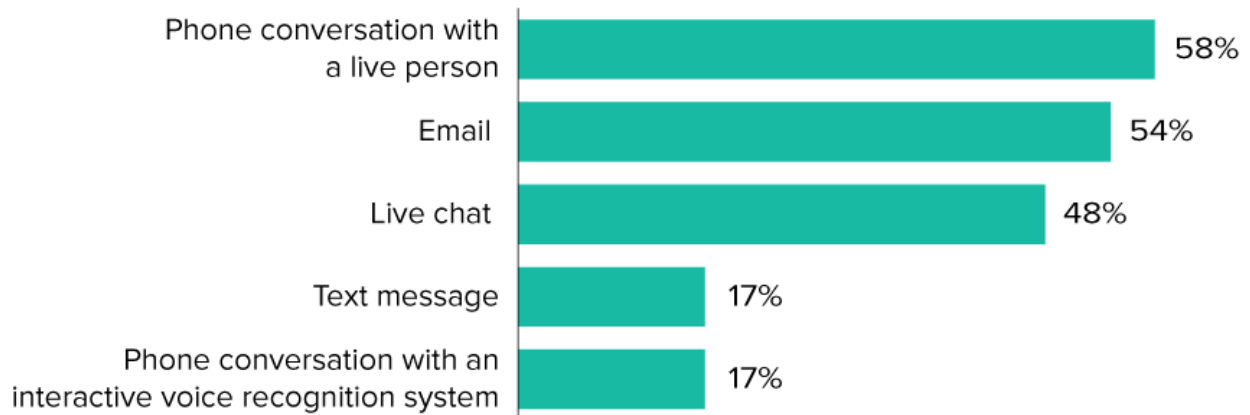
# 04 /

# AI-ENABLED CUSTOMER SERVICE

There is huge potential for businesses both big and small to leverage AI's natural language processing capabilities to better serve their customers and prospects. In the service sector, live chat has revolutionized service, with consumers finding it almost as preferable as live phone and email support – and HubSpot believes customer service bots are the next evolution. A service bot provides the shortest path for a website visitor to get the answer he or she seeks.

## Live chat is nearly as popular as phone and email

*When you have a question or problem you need help with, how do you like to connect with a company's customer service group?*

| | |
|---|---|
| Phone conversation with a live person | 58% |
| Email | 54% |
| Live chat | 48% |
| Text message | 17% |
| Phone conversation with an interactive voice recognition system | 17% |

Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

Here's the concept: An AI-enabled bot sitting on a business's website answers visitors' questions on demand, such as: What's your pricing? What's your company phone number? Where is your office? The visitor gets a direct answer instead of having to click through the website navigation to find that information. When given the scenario, 57% of our respondents were interested in getting real-time answers from bots on a company website. This is the highest level of interest exhibited by our respondents for all of our bot scenarios across ecommerce and service.



## 57% are interested in getting information from bots when browsing a business's website
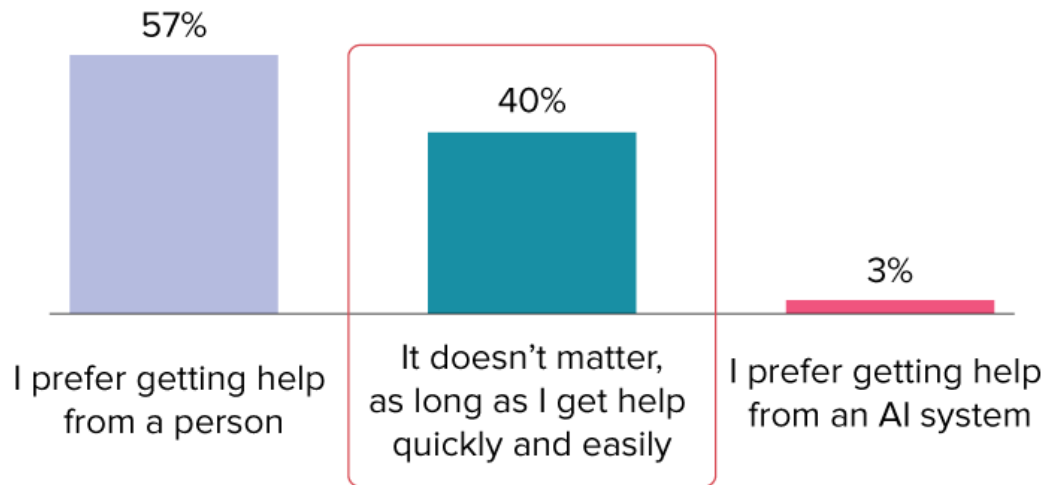
Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

Beyond information bots sitting on a company website, many are comfortable using AI-enabled technologies for more involved customer service requests. When we asked respondents if they had a preference for who should help them in a service setting, 40% didn't care if they're helped by a person or AI tool — good news for AI service companies. The most compelling use case is for simple customer service questions, such as changing a billing address, with openness to AI increasing to 53%. For more complicated cases that require multiple steps or involve more technical help, people prefer human assistance — in that case, openness drops to 26%.

## Many are comfortable using AI for customer service requests

*If you reach out out to a company's customer service group, does it matter if a person or an artificial intelligence (AI) enabled program responds to your question?*

57%

40%

3%

I prefer getting help from a person

It doesn't matter, as long as I get help quickly and easily

I prefer getting help from an AI system

## Openness to AI increases significantly for easy service questions

*Does it matter for a simple customer service request?*

53%
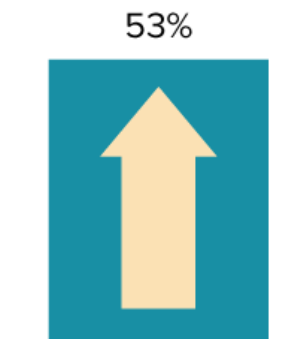
It doesn't matter, as long as I get help quickly and easily

*Does it matter for a complicated customer service request?*

26%
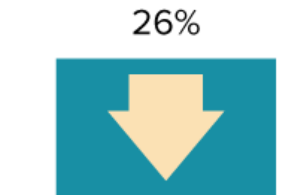
It doesn't matter, as long as I get help quickly and easily

Base: 1,426 consumers in the US, UK, Ireland, Germany, Mexico, and Colombia
Source: HubSpot Global AI Survey, Q4 2016

Companies can avoid customer hesitation by complementing AI-enabled service programs with live service. If an AI service program can't help the customer, the program can switch over to a live representative who can complete the request. The line between selling and service also disappears – an AI bot can both sell and handle customer service requests. As we continue Sam's interaction with GoSun Stove, Sam sends a follow-up question after completing his purchase, and Matt, GoSun's service representative, takes the lead in answering.

**GoSun Stove** [Manage]   [+ New Message]

**GoSun Stove**   12/20, 1:43pm
Ah ok Sam, fingers crossed on the stove! Facebook is a quite convenient place to purchase... Thanks again for reaching out!

-Matt

**Sam Mallikarjunan**   12/20, 1:44pm
Thanks! The wife is going to love this. We're traveling the country for a year in a Sprinter van that we're converting into a Class B RV and this will be perfect.
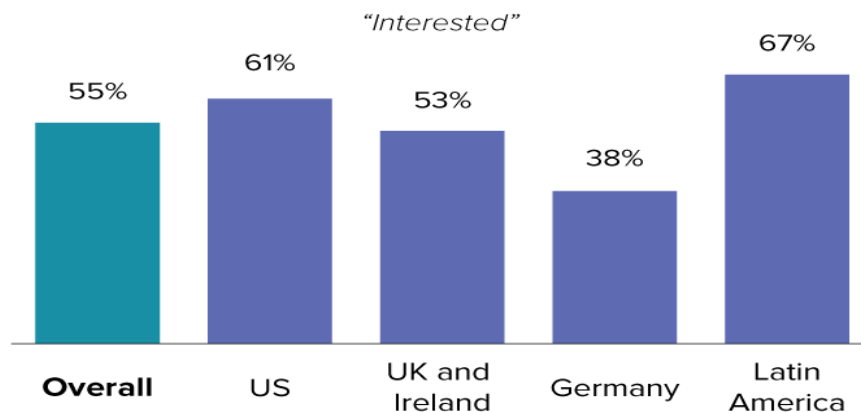
Question: What's the "GoSun Brew" I keep reading about? It'd be great if we could boil water for coffee etc. in this.

**GoSun Stove**   12/20, 2:37pm
It's a water boiling insert that we're releasing in February. It can cook 12oz of water, but at the moment I can't just too much more than that as our current supplier has not met our quality standards and we are looking to another partner to take the job.

As for the RV we're in a similar boat! Buying a Sprinter van in the coming weeks to convert into a solar cooking tour bus! 🙂 Maybe we'll cross paths on the road!

-Matt

**Why This Matters To Businesses:** As more people rely on their mobile devices to get things done, they'll expect to do more on the go, including interacting with a business's customer service representatives. The most successful businesses will be ones that operate where their customers already spend their time. Of our respondents, 55% are interested in using their personal messaging apps for customer service conversations (though German respondents are much less enthused about the idea). Just like a ecommerce bot, automated customer service bots are always on, operate on a one-to-many scale, and live on your website, in addition to being accessible from the most popular social networks and messaging applications to create delightful post-purchase experiences. AI technologies will bring on an age of instant, always available service.

Are you interested in using messaging apps, like Facebook Messenger, to converse with a customer service representative when you have a question or problem?

*"Interested"*

| Overall | US | UK and Ireland | Germany | Latin America |
|---------|-----|----------------|---------|---------------|
| 55% | 61% | 53% | 38% | 67% |

Base: Consumers in the US: 350, UKI: 307, Germany: 365, Latin America (Colombia + Mexico): 404
Source: HubSpot Global AI Survey, Q4 2016

# 05 /

# CONCLUSION

We laid out opportunities for businesses to leverage AI in customer service and ecommerce, but AI will impact nearly all facets of business and modern life. Many established technology companies like Google, Twitter, and Intel have been [acquiring AI companies](#) at rapid pace, anticipating the proliferation and widespread adoption of AI tools and services at both a consumer and business level. To highlight the breadth of AI's impact on people's daily lives, we'll conclude with some real life examples of technologies available today. Their use cases span personal and business activities.

## AI can:

### ANSWER YOUR DOOR

# CONTROL YOUR LIGHTBULBS

hue

**Every night at 12:00 AM turn the lights off**

by **PHILIPS**

👤 1.4k     works with 🕐

hue

**"Alexa, trigger party time"**

by **PHILIPS**

👤 3k     works with 

hue

**Automatically turn on your lights at sunset**

by **PHILIPS**

👤 3.8k     works with wu

hue

**If it begins to rain then change the light colors to blue**

by **PHILIPS**

👤 1.5k     works with wu

hue

**Automatically turn your Hue lights blue whenever it starts to rain**

by **PHILIPS**

👤 49k     works with wu

hue

**Turn off your Hue lights when you leave home**

by robison

👤 19k     works with 

# HELP YOU FIND NEW AND INTERESTING RECIPES
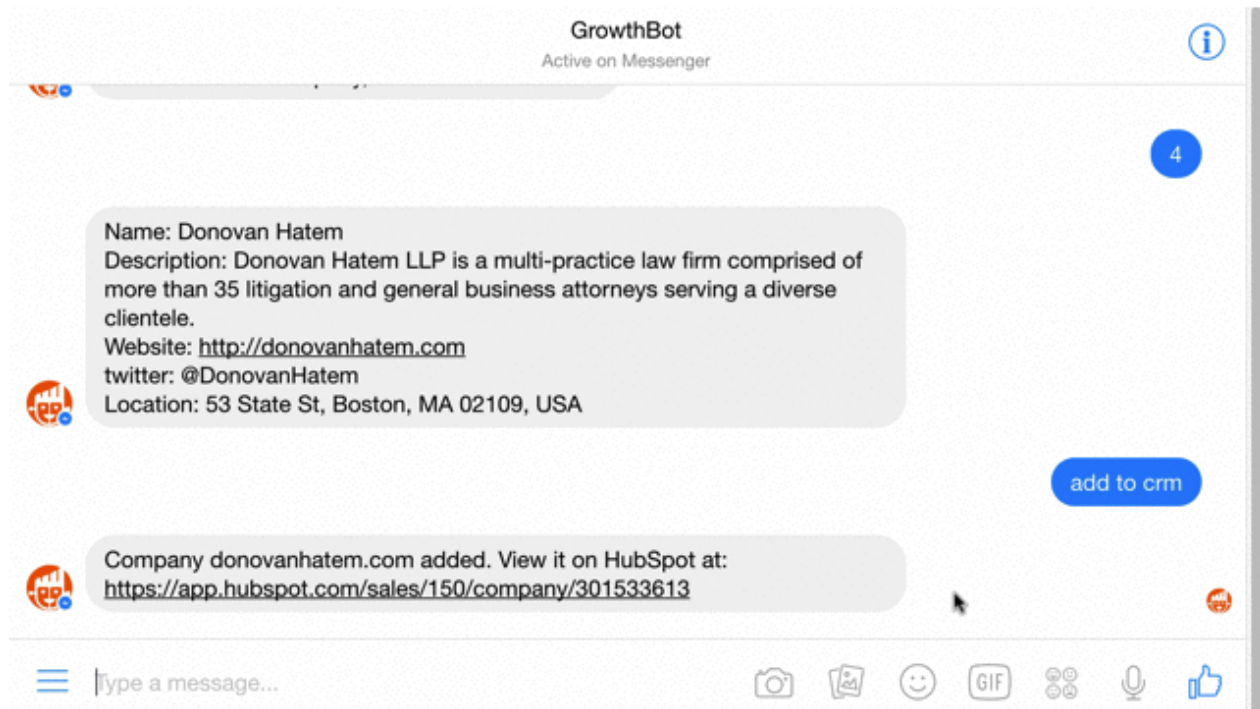
# Cognitive Cooking
## with Chef Watson

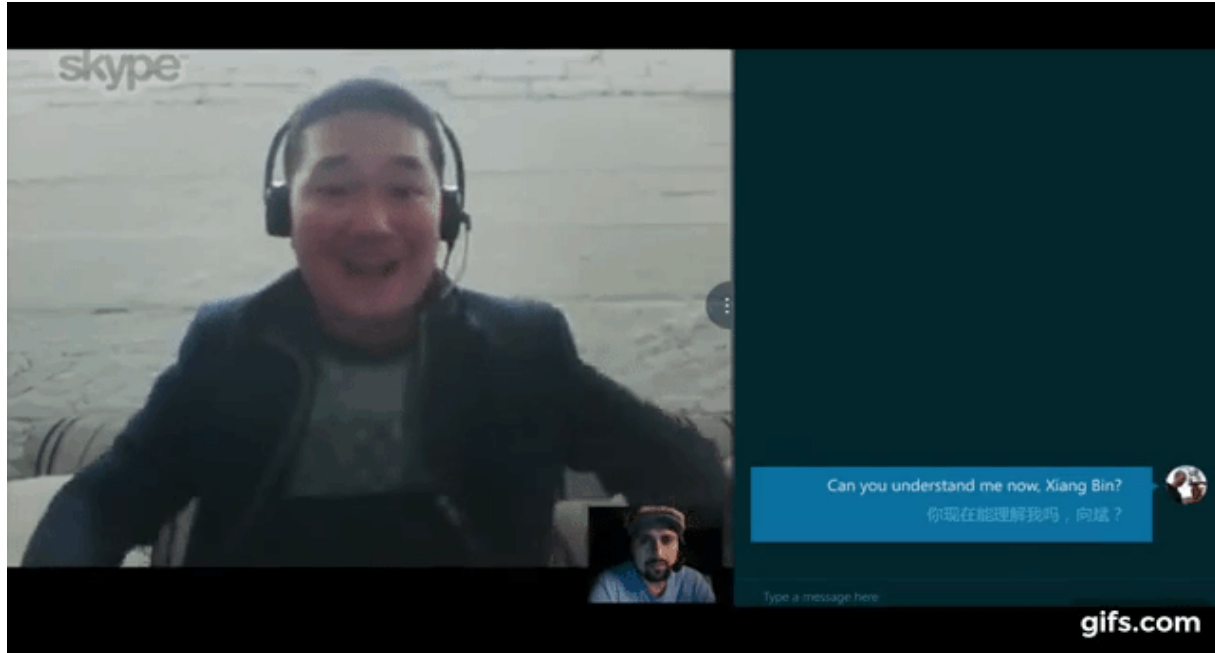**Recipes for Innovation from IBM & the Institute of Culinary Education**
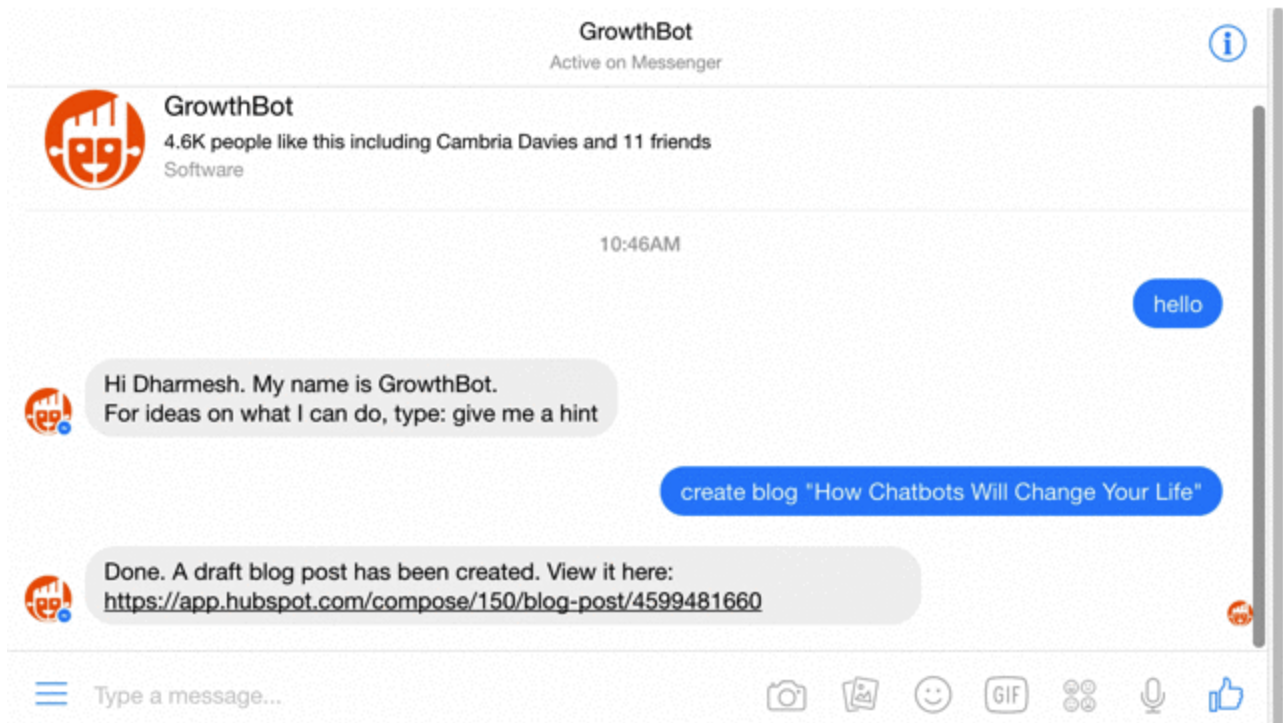
# DRIVE YOU AROUND TOWN



# HELP YOUR SALESPEOPLE PROSPECT
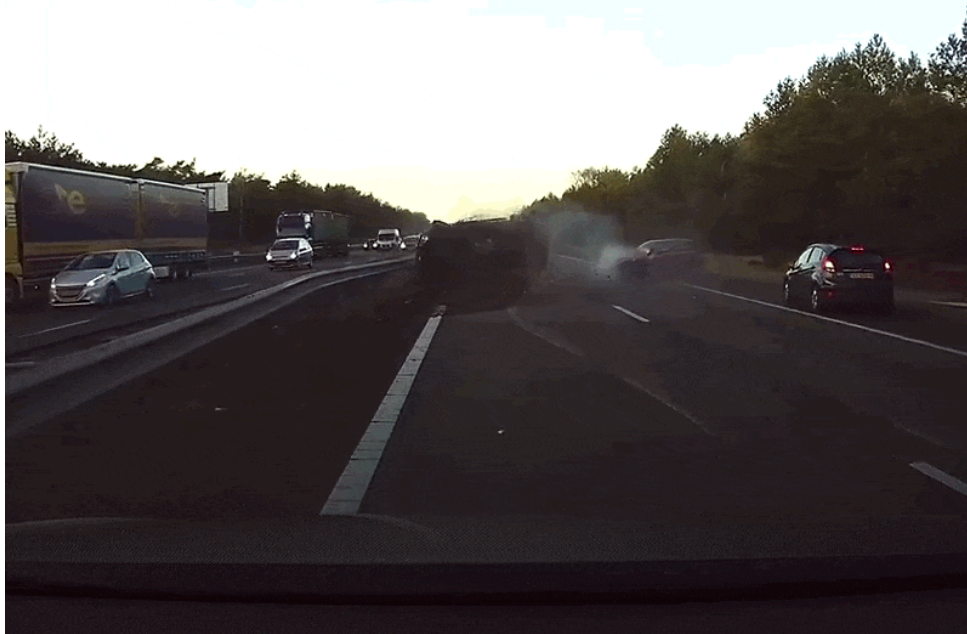# AND TRACK ACCOUNTS
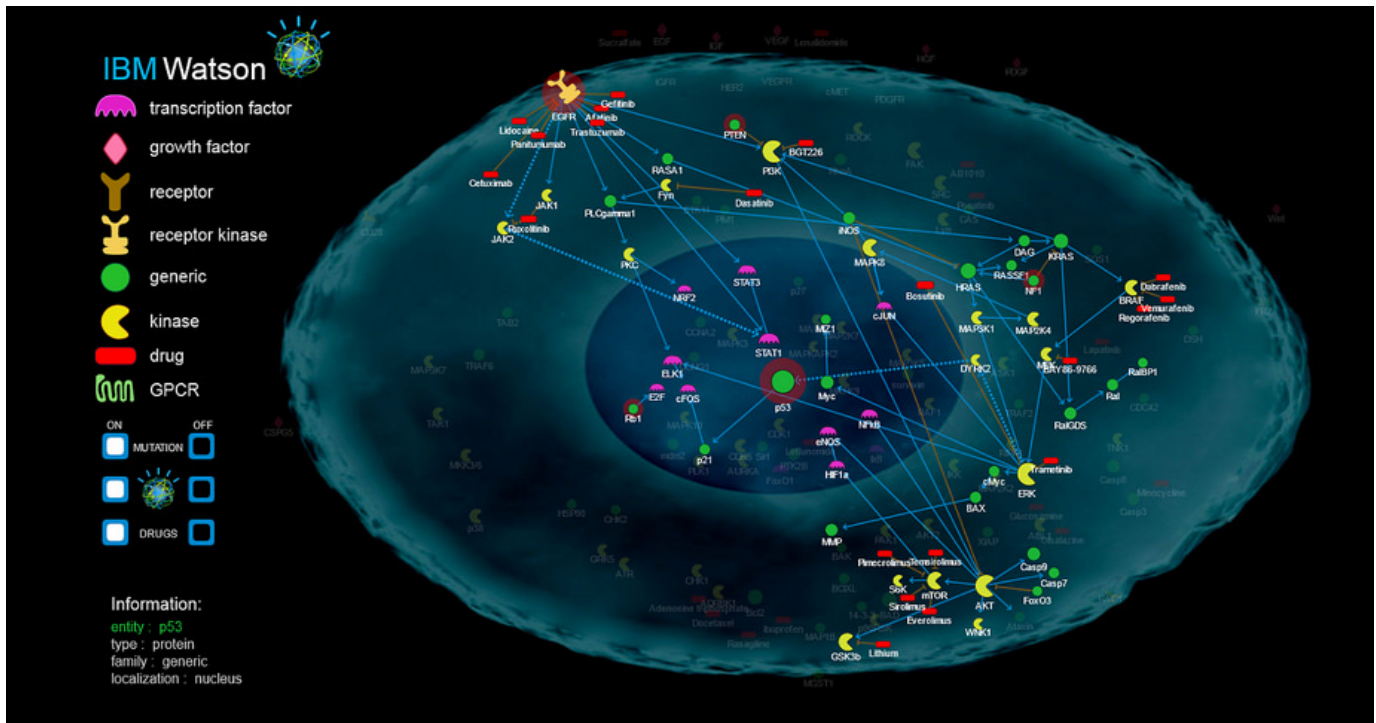
# TRANSLATE CONVERSATIONS IN REAL TIME



# HELP YOU GET STUFF DONE FASTER BY MAKING SOFTWARE EASIER TO USE

## HELP YOU AVOID TRAFFIC COLLISIONS



## HELP DOCTORS FIND
## TREATMENTS FOR CANCER

# 06 /
# METHODOLOGY

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HubSpot Research ran an online survey via a general population panel maintained by Survey Sampling International (SSI). 1,426 online consumers from Ireland, Germany, Mexico, Colombia, UK, and USA make up the sample. The survey was available in English, Spanish, and German, and was fielded in October and November 2016.