# A Brief History of Artificial Intelligence and How It's Revolutionizing Customer Service Today

**SmartMax Software, Inc.**

Natalie Delamater

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## INTRODUCTION

It's no secret that technology is advancing faster than any of us can keep up. As things progress, our lives get easier and more simplified, and more and more opportunities become available. Because of the internet, a company's market goes from just the folks around town, to literally all 7.5 billion inhabitants of Earth. While that can be fantastic for business, it can create a whole new set of problems as far as logistics go. How do you communicate with customers that don't speak your native language? What if your business hours aren't compatible with customers in different time zones? How do you staff enough customer service representatives to make sure your customers are assisted in a timely and professional manner?

Luckily, the advances in technology have paved the way for some pretty groundbreaking solutions to the above mentioned problems, and then some. Artificial intelligence is making its way into business, and is especially helpful in customer service. In fact, it is projected that by 2020, 85% of customer interactions will be managed without a human, but instead with AI chat bots. (Gartner)

In this white paper, we will discuss the history of artificial intelligence, modern advances in the technology, and how it can make a huge difference in your business today.

## A VERY BRIEF HISTORY OF ARTIFICIAL INTELLIGENCE

While computers have only been around for approximately seven decades, man has, for centuries and centuries, toyed with the idea that machines could complete the same cognitive processes as the human brain. Early ideas and renderings of robots can be traced as far back to Greek mythology, and Chinese and Egyptian culture. To get a quick sense of the history of AI, robots, and machines, here's a very brief time line of contributing milestones:

### ANCIENT HISTORY
- Many myths in antiquity depicted human-like artifacts. Myths involving the blacksmith Hephaestus, for example, depicted mechanically-operated servants. Though the term "robot" wouldn't be invented for many centuries, this can be considered one of the first conceptualizations of the idea.

### 13th Century
- The first humanoid robot, invented by Arab inventor Al-Jazari in 1206 AD, is created.

### 15th Century
- Johannes Gutenberg invents the printing press around 1440 AD.
- Leonardo da Vinci designs a "robot" in 1495

### 16th Century
- The first measuring machine, the clock, is invented.

### 17th Century
- Machines capable of digital and arithmetical calculations are invented by Blaise Pascal and Sir Samuel Morland, and perfected by Gottfried Wilhelm Leibniz.

### 19th Century
- The first programmable machine, the Jacquard loom, is invented by Joseph-Marie Jacquard.

## 20th Century
- (1912) Chess machine operated by electromagnets is invented by Torres y Quevedo.
- (1920) The term "robot" is first used in the play R.U.R (Rossum's Universal Robots) by Czech playwright Karel Čapek.
- (1939) Westinghouse Electricat introduces a "mechanical man" at the 1939 World's Fair.
- (1945) The concept of "heuristic thinking" is discussed in George Polya's How to Solve It and is said to have greatly influenced the science behind artificial intelligence.
- (1950) The three laws of robotics are published by American writer Isaac Asimov.
- (1956) The term "artificial intelligence" is coined by John McCarthy.
- (1956) The first functional AI program is written by Allen Newell, JC Shaw, and Herbert Simon.
- (1957) Arthur Samuel of IBM writes the first game playing program, capable of learning checkers and challenging a world champion.
- (1962) Unimation, the first industrial robot company, is founded.
- (1963-1971) It is discovered by several scientists that computers can solve the same kinds of analogies, problems, and understand language.
- (1973) The first mobile phone call is made
- (1976) The Apple 1 hits the market and sells for $666.66
- (1980) Lisp machines officially hit the market.
- (1981) Danny Hill designs the connection machine.
- (1989) The World Wide Web is created.
- (1992) IBM creates the Simon Personal Communicator, the first "smartphone."

## 21st Century
- (2007) Apple releases the iPhone.
- (2010) Apple introduces personal assistant "Siri," using voice-recognition and artificial intelligence technology.
- (2014) Microsoft introduces "Cortana," a direct competitor of Apple's Siri
- (2015) Amazon releases "Echo," with personal assistant Alexa.
- (2015) The Future Society at Harvard launches the "AI Initiative," dedicated to the study, advancement, and ethical use of, artificial intelligence.

## The Use of Technology in Customer Service

Automated phone systems, known as "automated attendants," have been around since the early 1980s. This technology was created to route customers to the proper department using a simple menu system ("for technical support, press "1," to speak to a representative, press "0," etc). While these systems were effective at acting as an operator, they weren't "intelligent" in the sense that they couldn't answer questions or learn over time.

Many studies have been conducted regarding consumer satisfaction with automated phone systems, and as one can imagine, the majority of those studies show that customers are generally frustrated and disappointed by them. In fact, a study conducted by American Express showed that 67% of customers have hung up on a customer service call when they couldn't speak to a live person in a timely enough manner.

With the widespread development of the World Wide Web and advancements in internet technology, came the introduction of live chat support. Live chat support was a great solution to customers because it gave them the ability to connect to businesses via web chat, and speak to them in real time.

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As live chat proved to be a more favored form of customer service (versus phone or email support), artificial intelligence started to work its way into the mix to simplify the way companies engage with their customers via chat. Unlike the unsophisticated spam bots that started popping up in chat rooms in the 90s and early 2000s, these newer, more complex chatbots are able to think and communicate as a human would. With a little bit of programing, they can learn as they go and act as efficiently as a chat agent.

## ChatBots in Online Customer Service

Being integrated globally by companies small and large alike, chatbots are the new frontier in online customer service. Using highly advanced technology, these bots can learn natural language, simulating human conversation with impressive accuracy. Because of a chatbot's initial setup, and ability to learn as it goes, it has the unique capability of acting as a multi-lingual 24/7 chat agent, enabling businesses to serve customers from all over the world day and night.

Perhaps the chatbot's biggest impact has been in its cost-cutting potential. According to Forbes, in 2017 alone, chatbots saved businesses a combined $20 million worldwide. Staggeringly, that number is expected to reach $8 billion by 2022. Chatbots are incredible because they allow you to serve the maximum amount of customers, utilizing the minimum amount of human agents, without sacrificing quality.
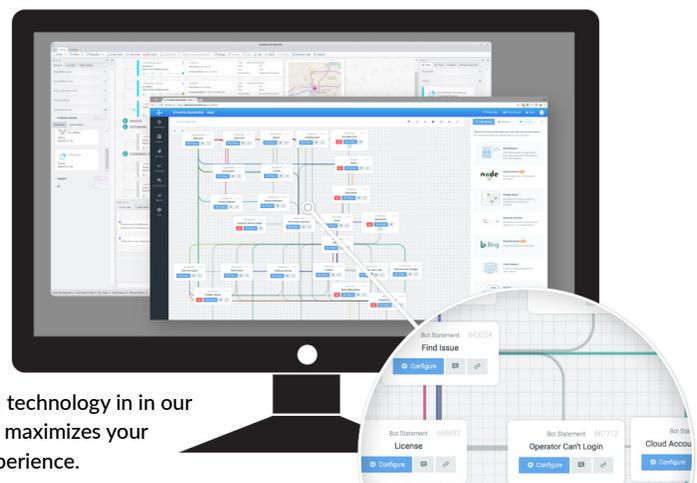
## CHATBEACON CHATBOTS

The ChatBeacon ChatBot uses advanced technology to learn, comprehend, and act. In conjunction with a Motion.ai subscription, this upgraded feature can be set up in just a few minutes. Once activated, the ChatBot instantly greets every online visitor and captures customer information during a natural conversation, eliminating the need for a PreChat survey. ChatBots can provide predefined answers to common questions and can intelligently route chats to different human agents or departments based on the customer's inputs. Because of the ChatBot's initial setup and ability to learn as it goes, it has the unique capability of acting as a 24/7 chat agent, helping your website show an online chat option at all times. In the event that the ChatBot is unable to assist your visitor, it can capture offline messages and send them to your live agents via email to be answered at their earliest convenience.

Unlike most automated chat bots, the ChatBeacon ChatBot has the ability comprehend and communicate in a natural conversational tone. This means that your customers can get the help they need, as if they were speaking to an actual person. This saves your business time and money, while still giving your customers friendly and effective customer support around the clock. Your ChatBots can have names and avatars, just as your live agents would, giving a more "human-like" feel to the chat experience.
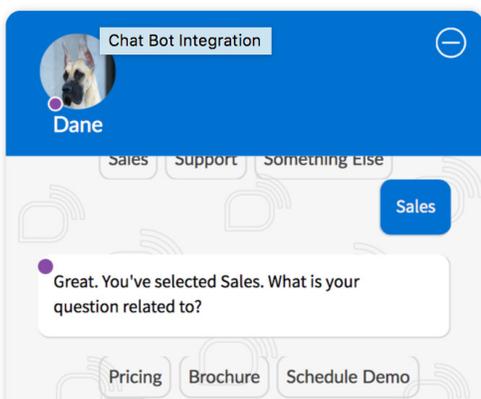
Integrated AI technology in in our chat window maximizes your customer experience.

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## Compatible ChatBot Platforms

There are four key players in the chatbot game right now: IBM Watson Conversation, Google Dialogflow, Motion.ai, and Microsoft Bot Framework. ChatBeacon Live Chat, unlike any other live chat solution on the market, is fully compatible with ALL of these platforms, giving you the choice to select the one that fits your needs the best. Available with Everything+ plans, you can integrate any of the following chatbot platforms and have your bot up and running on your website in a matter of minutes:

### IBM Watson Conversation

**User-Friendly**

IBM Watson Conversation is extremely easy to setup and operate for both developers and non-technical users. Quickly build and deploy an IBM chatbot and use it as a Virtual Agent that can answer chats across all chat channels: website, SMS Chat and Facebook Chat, even across multiple websites and departments.

**Time-Saving**

Save time by deploying and training intelligent chatbots in just a few minutes via a web interface, with no complex code-writing needed. Eliminate lengthy prechat surveys with chatbots that capture customer information in a natural conversation.

**Robust Platform**

Take advantage of the IBM platform to integrate cognitive computing into your ChatBeacon Live Chat account. Create chatbots that use IBM's advanced technology to learn, comprehend, and act, serving your customers as efficiently as a human agent.

**Natural Language**

The IBM technology learns as it goes, and understands natural language. Chatbots can respond to customers in a human-like conversation, with impressive accuracy. Your customers will never know they're speaking to a bot.

### Google Dialogflow
*(Part of the Google Cloud Platform)*

**Multi-lingual**

Google Dialogflow supports over 20 languages and seamlessly integrates with over 14 platforms. Expand your reach by building bots that are multi-lingual.

**Natural Conversation**

Learns to recognize the intent and context of what a user says, allowing conversational interface to provide highly efficient and accurate responses. Your users will never know they're speaking to a bot.

**Preset Bots**

Save time by utilizing any of the 30+ fully-customizable pre-built industry-specific agents that specialize in different areas of knowledge.

**Customer Service**

Follow-up on orders, schedule appointments, answer commonly asked questions, and assist users with simple tasks by building conversational interfaces designed to perform these tasks.

## Motion.ai
*(Now partnered with Hubspot)*

**Easy-to-Use**
> The Motion.ai chatbots are extremely user-friendly. Upon installation, chatbots can be set up in just a few minutes.

**Time Saver**
> Chatbots capture customer information during a natural conversation, eliminating the need for a lengthy prechat survey.

**Intelligent Routing**
> Simply the chat experience by enabling bots that route chats to different agents or departments using keywords.

**Capture Messages**
> In the event that the chatbot cannot assist the user, Motion.ai chatbots can capture online messages from visitors and email them to agents to answer at their earliest convenience.

## Microsoft Bot Framework
*(For advanced users and developers)*

**Speedy Development**
> Azure Bot Service speeds up development by providing an integrated environment that's purpose-built for bot development with the Microsoft Bot Framework connectors and BotBuilder SDKs. Developers can get started in seconds with out-of-the-box templates for scenarios including basic, form, language understanding, question and answer, and proactive bots.

**Great Conversationalist**
> Build, connect, deploy, and manage intelligent bots to naturally interact with your users. Learns native language so well, your customers will think they're interacting with a live human agent.

**Cognitive Services**
> Create bots that can recognize a user in photos, moderate content, make smart recommendations, translate language and more. Cognitive Services enable your bot to see, hear, and interpret in more human ways.

**Commerce Bots**
> Together, the Azure Bot Service and Language Understanding service enable developers to create conversational interfaces for various industries like banking, travel, entertainment, and more.

The ChatBot upgrade is available with all ChatBeacon Everything+ subscriptions. With plans starting at just $35 a month, there's ChatBeacon option to fit any budget.

An accounts with the one of the integrated platforms will be needed to take advantage of the chatbot features included under these integrations.

## SUMMARY

While artificial intelligence isn't a completely new concept, it is definitely becoming much more prevalent these days. As the years have progressed, the technology has advanced quite a bit and made its way into our daily lives. Businesses are embracing this new wave of possibilities and it is projected to take off over the next few years, especially in the area of customer service. Websites offering live chat can now supplement their staff of customer service representatives with artificially intelligent chat bots, among the most advanced and robust, the ChatBeacon ChatBot. With the ability to learn, comprehend, and act, this state-of-the-art feature can act as a 24/7 agent, available to serve your customers at any time. With a subscription to Motion.ai and a simple set up, the ChatBeacon ChatBot can be up and running on your website in minutes.

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# THANK YOU.

For more information, contact Dragos Turner
dragos@chatbeacon.io

SmartMax Software, Inc. | 8801 S Yale Ave, Ste 460, Tulsa, OK 74137 | www.chatbeacon.io