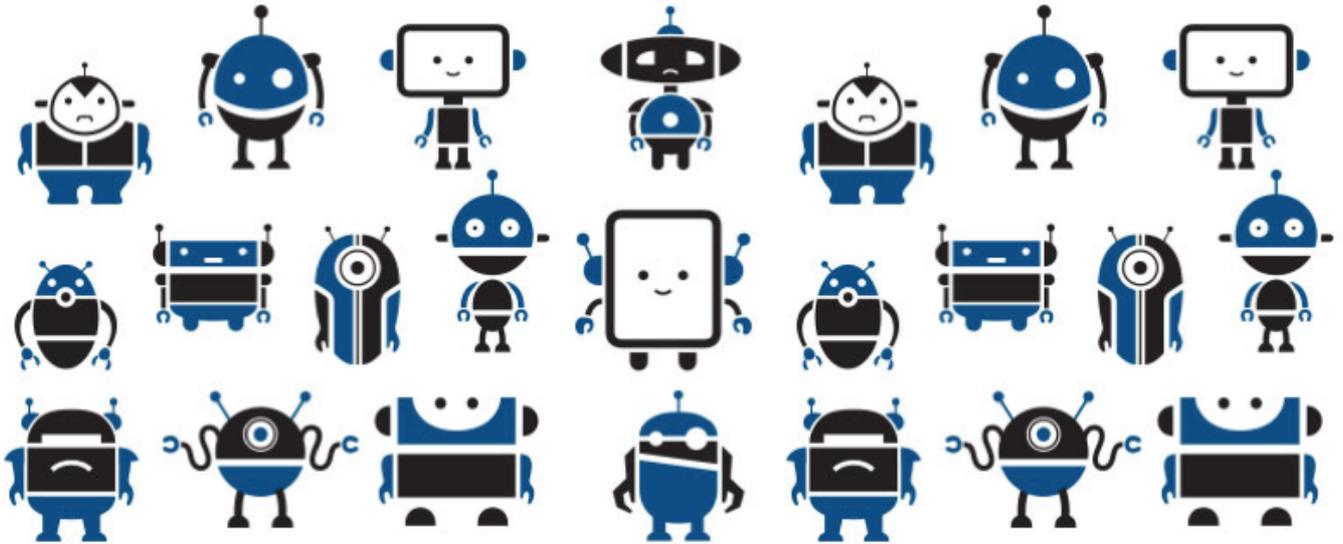


TECHNOLOGY 101



BOTS, A TECH TREND FOR 2018

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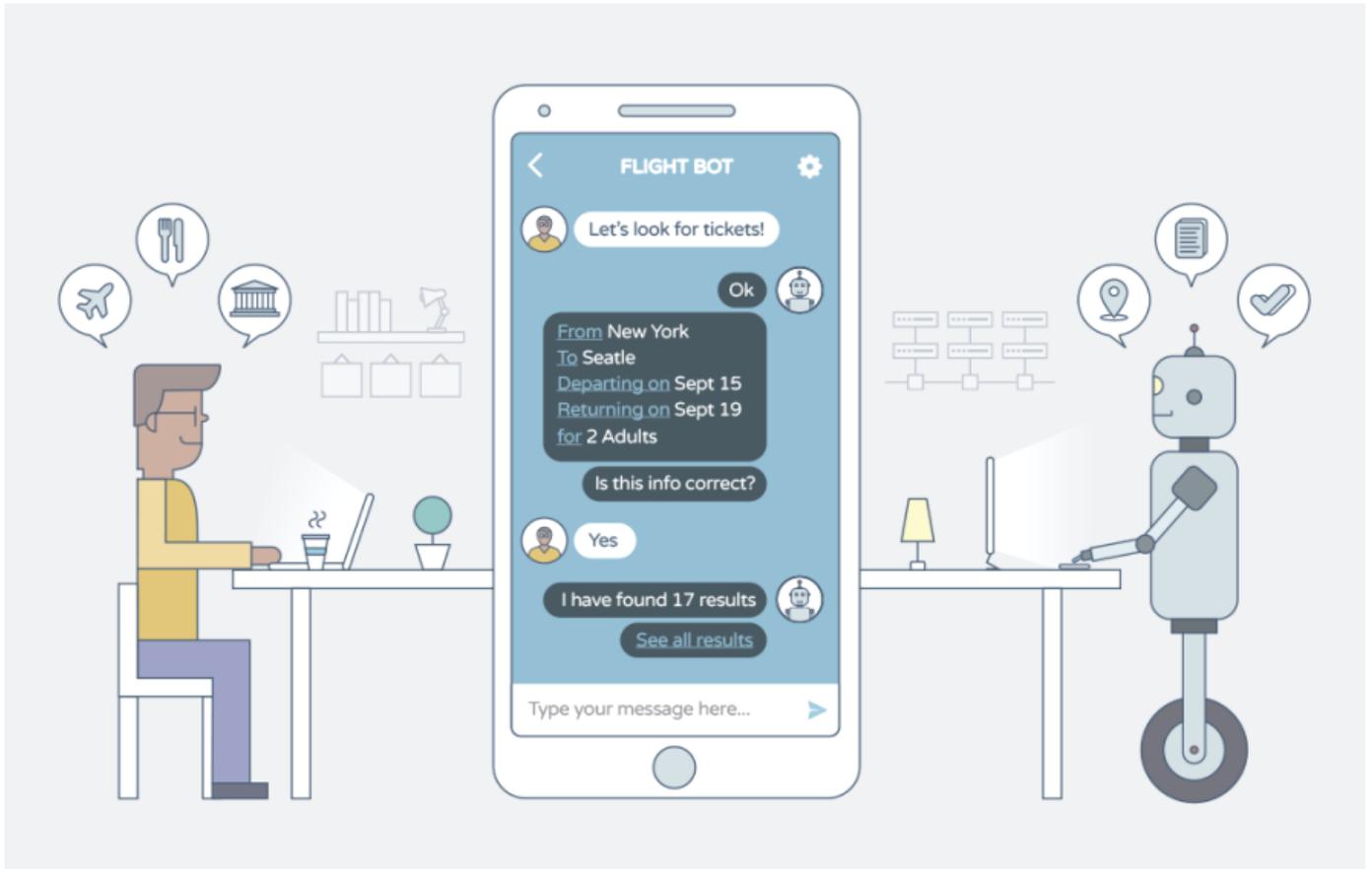
In an era of continuous innovation, everybody is curious about where technology is heading for this year. The big picture is that: Technology seems to have a bright year ahead (neglecting the many unpredictable obstacles and problems that might show up on the way). Artificial Intelligence and Augmented Reality are among the hot topics which seem to be very promising and thus are being worked on and developed recently. According to Forbes, what seems to get great attention during the next 12 months is “Bots’ development”, and if you are wondering, these “bots” I am talking about are not something new, they have been around for a long time, it’s just that these days, they are being integrated into almost every aspect of our daily life, without us understanding how often we are using them.

How did humans come up with the “bot” idea?

First, let’s start with an intro to what bots are and how they came to be such a broadly used “tool” in our daily lives and one of the main development point in technology. Bots are a type of Artificial Intelligence technology, a software application that can complete tasks in an automated way, without needing human intervention. Artificial Intelligence of Modern times starts with the Turing Test, however, “Artificial Intelligence” terminology was invented nearly a decade later by a Mathematics professor at MIT.

Still, Alan Turing is known to hold copyrights of the first idea of the Artificial Intelligence. Since the 1950s when Alan Turing came up with the Turing Test, many developments were carried out in the field and many AI trials failed the Test, until 2014. In 2014, an AI model developed in Ukraine is said to have been the first AI that passed the Turing Test. Further advancement of AI encouraged the development of programming languages for AI and then bots to stimulate psychotherapists (*ELIZA* is the first kind of chatbots we know nowadays, developed in MIT's laboratories) or similar "talking" bots like Shakey. What made a difference in the chain of Artificial Intelligence inventions was Freddie, a bot developed in the 1970s in Edinburgh, which would not talk, instead, it would use visual perception to collect different objects just by looking at them, without any interference from the outside "human" world. Furthermore, in the 1970s, bots were for the first time integrated into medicine. *MYCIN* and later on *INTERNIST-1* were able to ask questions to collect data from patients and give a possible diagnose of their illness, thus turning into a decision support system to assist doctors during the diagnosis process. Despite medicine, bots became a novelty in self-driving cars by the end of 20th century. *ALVINN* became the first computer controlled and self-operated vehicle and it was used for military purposes. By the end of 20th century, the first robot races were out as well. These competitions were a watershed in the history of Artificial Intelligence and technology. The race named RoboCup was officially held for the first time in 1997 and it was a competition of robots playing table-soccer.

It was the 21st century that marked a boost in investment in Artificial Intelligence. Being aware that this field had a huge potential to advance rapidly, great companies and research departments of universities started paying more attention to further improve bots' capabilities to carry out different activities. Computer games are thought to be an early form of human-bot interaction. In 2000, people got amazed by the first chatterbot, simply "an old version" of Siri, which included a significant amount of data you could search for. At this time, technology saw a great achievement in self-driving cars, as Stanford University created Stanley, a car that could traverse a desert in less than 10 hours. The main turning point in bots' "evolution" became voice search. No robot ever could understand the spoken-language before Siri was released by Apple in 2011. Siri could give answers to questions without the user having the need to use a search engine. The next level of voice search was Echo, a speaker with a built-in voice recognition that can hear from across the room. Echo was powered by Amazon's assistant, Alexa, not only to answer questions and respond to prompts but to control home functionalities as well. In 2015, Google released Google Home and in April 2016, Facebook started integrating bots to its platform. In 2017, Olly was created. Olly might look a lot like other personal assistants but what makes it different is its ability to adapt to its owner's behavior (this was done by using machine learning). Nowadays Facebook provides big companies with automated customer service and App-wise bots are already a "common" thing.



Bots in daily life? They are almost everywhere.

We communicate with bots (chatbots) when we use electronic commerce apps, companies' services to ask for help or clarifications. Moreover, we are interacting with bots when we want informative platforms such as CNN to provide us with updates and the latest news or when we want to set reminders, to schedule our meetings and to have things done. By handling all of these tasks, bots are saving us a great deal of time. Keep in mind that we are also asking a *bot* whenever we use specialized search engines like Poncho. There are other ways we incorporate bots into our lives, such as for marketing purposes, business and enterprise services and many more.

What are bots up to this New Year?

We can remember watching sci-fi movies about all these tools that are now a reality; we have them and we use them to make our lives easier. Silicon Valley companies are working on the advancement of these tools to make them better, fancier, more sophisticated and even more infallible. As Jay Samit (independent vice chairman of Deloitte) says in one of his articles, bots will become "Sancho Panzas" and will make humans feel like "Don Quixotes" by consistently telling them what to do, and reminding them of their daily tasks.

Is that creepy or is that cool?