Chatbots in every day life
Introduction

As humans we always strive to innovate to make life easier as well as for just pure creativity sake. Chatbots are a combination of both. What is a chatbot? A chatbot, at its most basic level, is a program designed to converse with a user but has since evolved to give suggestions, start conversation and take simple commands. Chatbots can now be found and are used for various different reasons, the most common of which being Apple’s ‘Siri’ that allows users to ask questions and give commands simply by talking to the device in everyday spoken language. The future of chatbots is very promising as major leaders in the tech industry are predicting chatbots to be the future. Microsoft CEO Satya Nadella announced that chatbots were “the next big thing”, to such a degree of impact that the web browser and the touch screen had (Kovach, 2016). Facebook's Mark Zuckerberg also proclaimed that chatbots were the solution to the problem of app overload and guarantees future phones will depend on them (McMillan, 2016).

History

One of the first successful chatbots created was called ‘Eliza’. Joseph Weizenbaum developed Eliza in the early 1960s by using simple pattern matching and a template-based response mechanism to mimic the conversational style of a psychotherapist, mainly by directing the conversation towards the user’s feelings (Dale, 2016). Yet this chatbot didn’t hold any memory of the conversation being held and could not hold a conversation. In 1972 Parry was created as an evolution of Eliza, but instead responded as a paranoid schizophrenic but still basically answered user’s questions (The History of Chatbots, 2016). 1988 was the year chatbots took a big step with ‘Jabberwacky’, where users could now talk using everyday spoken language and still converse with the bot rather than the previous text based bots. One of the first bots that could actually hold a conversation was A.L.I.C.E or ‘Artificial Linguistic Internet Computer Entity’, which could apply heuristic pattern matching rules to human input and was only developed in 1995 (The History of Chatbots, 2016). Alice can be compared to ‘Cleverbot’ that was released several years later. After upgrading the system over the years, it was put against the famous Turing test. It was voted to be human 59.3% of the time, whilst real humans did only slightly better and were assumed to be humans 63.3% of the time (Gehl, 2013). Some would argue that despite not achieving a better result than real humans, the fact that it was voted to be human significantly over
50% of the time, shows the result was not purely chance and thus passing the test. ‘Smarter child’, created in 2001, is the chatbot known to be the precursor of Siri and Samsung’s S voice that could not only have fun personalized conversation but many other features such as quick data access. Five years later came ‘Watson’, a bot specifically made for jeopardy but a game changer in the history of chatbots. One of the first successful bots to incorporate Natural Language Processing and machine learning as well as take in incredible amounts of data. (The History of Chatbots, 2016). All of these only represents the most famous and ground breaking chatbots to have been created but many hundreds of thousands of chatbots have been made during this period for a variety of things and many more are still being made. On the forefront of technology and having the most effect on anyone’s everyday life are the voice-driven digital assistants, of which four currently stand out: Apple’s Siri, Microsoft’s Cortana, Amazon’s Alexa and Google’s new Assistant.

**The Big Four**

Computers and phones are a part of most people’s everyday lives and chatbots are changing the way in which we use them. One can now give tasks without the need of inputting any information through text but merely though spoken language, and for some, the device itself doesn’t need to be touched to give it orders. The most widely used ones are the considered to be ‘The Big Four’ of conversational agents. Released in 2014 for Windows Phone, Microsoft’s Cortana became available on the Windows 10 desktop operating system in 2015, which mid 2016 was also integrated into the Xbox One interface, changing the large industry of gaming(Dale, 2016). When it was first created, Cortana is available in English, German, Italian, Spanish, French and Mandarin. Apple’s Siri, which debuted on the iPhone in 2011, is now available on your desktop as of mid 2016. Siri adds a significant number of languages beyond those offered by Cortana, is considered to be smoother and can compute more tasks (Dale, 2016). Amazon’s Alexa, embodied in the Amazon Echo smart speaker, became widely available in the USA in mid 2015, but hasn’t since learned any new languages, and you can’t order it from outside the US. Google Assistant, announced in May 2016, is an extension of Google Now that is able to keep track of a conversation (Dale, 2016). This add-on to google now in most simple terms, adds context to your questions by keeping a record of previous phrases and making the connection. For instance, when you say ‘OK Google’ followed by ‘What’s playing tonight?’, Google Assistant will show films at your local cinema. But if you add ‘We’re planning on bringing
the kids’, Google Assistant will know to serve up show times for kid-friendly films. You could then say ‘Let’s see Jungle Book’, and the assistant will purchase tickets for you. Google Now supports a list of languages as long as your arm, but it’s unclear how quickly each of these will acquire conversational capabilities (Dale, 2016).

**Future**

Ordering at your favorite restaurants would be as simple as sending them a text. Your dry cleaner would know exactly when to pick up your laundry without you uttering a word. And when you run low on groceries, your refrigerator would order food for you. Foreseeing this immense potential, businesses are starting to invest heavily in the ever increasing ‘bot’ economy. A number of brands and publishers have already deployed bots on messaging and collaboration channels, including HP, 1-800-Flowers and CNN. Dozens of messaging apps have also integrated virtual assistants into their platforms, such Facebook Messenger chatbot called M that can do just about anything for you, even prank your friends (Beaver, 2016). The bot revolution is still in the early phase, but the interest is clearly growing among consumers and businesses alike. Currently, however, Facebook is attempting to push it to a new level by working on creating an A.I. platform for your home. Soon, you will be able to talk to and give commands to your house or car, something which seems to be straight out of an Ironman movie. When your house springs a leak, your house’s bot will send you a text and offer suggestions such recommendation to hire a plumber for you. Refrigerators will order groceries for us based on past orders or by scanning the fridge, our lawns will mow themselves on command and many more. As a result, many of our daily chores will be handled automatically (KOJOUHAROV, 2016). It is clear that with technology like this, the risk of everything being automated implies the loss of many jobs. Customer service representatives in the US alone for example, represent 79 billion USD worth of total salaries per year. Chatbots could replace at least 29% of these representatives, which would result in nearly 23 billion USD of savings annually (Raffath, 2016). Similarly, chatbots could result in $15 billion savings in the salaries of sales representatives as well as securities, commodities and financial service representatives. Chatbots could also save more than half the annual expenditure in salaries for insurance sales representatives. “Of the companies surveyed, 48% said that they already employ chatbots and automation tools for their sales, marketing and customer services, while 40% will implement automated technology by 2020.” (Raffath, 2016)
Conclusion:

It is clear that chatbots will have a great impact on our lives in the future, and evidence of that can already be noted today. For the users of the updated conversational agents, this implies a much smoother way of life as well as an easy interaction with your home, car and most importantly with businesses around the world. With many businesses looking to use this evolving technology, it poses great risk for employment in the hospitality department. Heavy funding by the world largest companies such as Apple, google and Facebook is a clear indication of the future trend and that the chatbots of today will soon be outdated. This automation will also incur security threats, especially when ordering and paying for things automatically, however a simple voice confirmation from the user would rectify this, assuming voice recognition security where commands can only be made by certain people’s voices, much like face-scan or fingerprint scan.
References:


