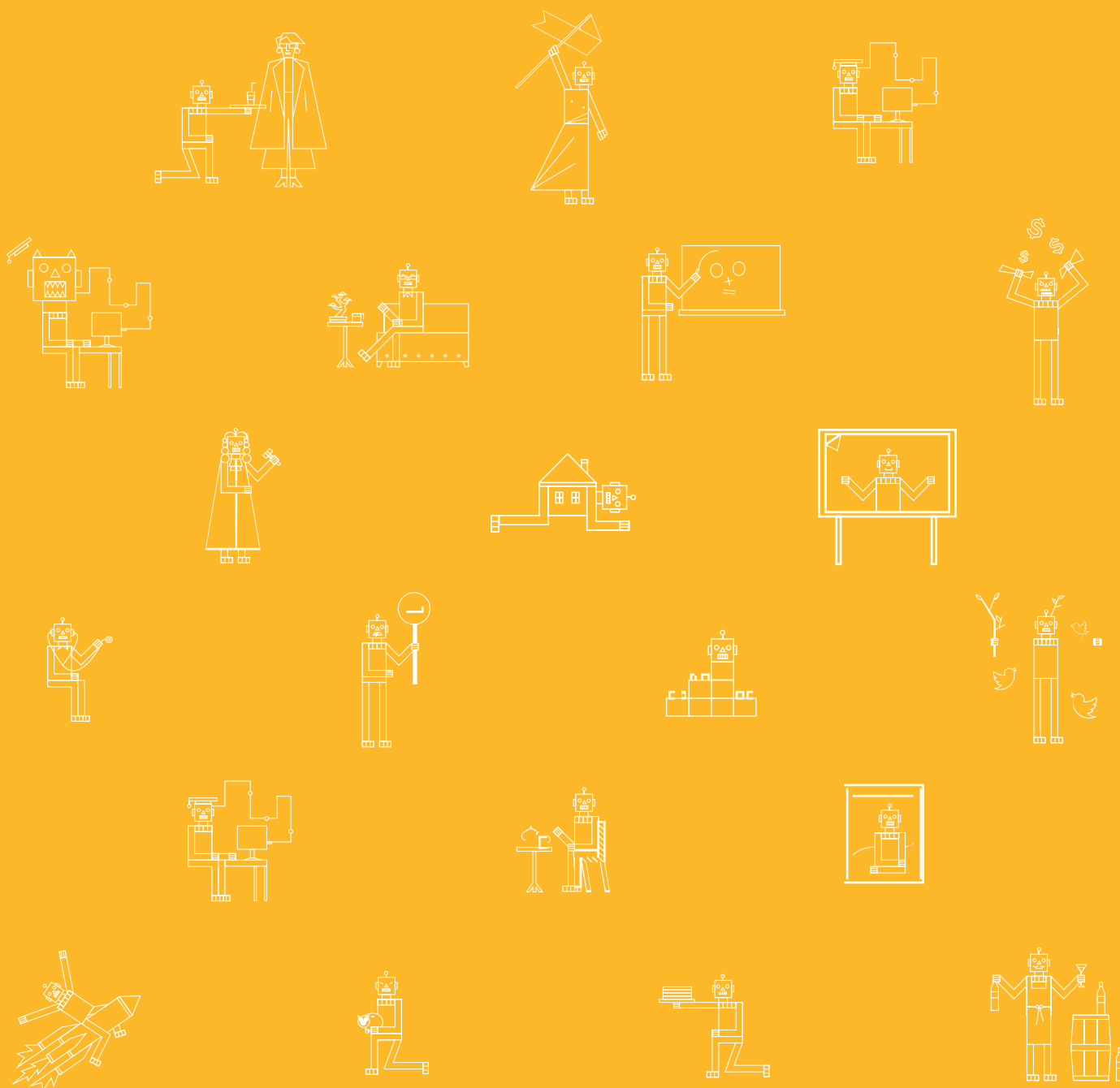# chatbots

technological watch from september 2017 to april 2018
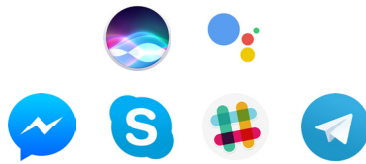
BDDI 2017-2018

Erwan Letue - Omar Jbara - Martin Jouvet - Sophie Laplace

What is a chatbot?

A chatbot is a service, powered by rules and sometimes artificial intelligence, that you interact with via a chat interface. The service could be any number of things, ranging from functional to fun, and it could live in any major chat product

Where can we find chatbot?

Chatbots work within chat platforms such a Facebook Messenger, Slack or SMS. Each chat platform has it's own features. These features determine the possible ways in which the chatbot can interact with the user, however the actual behaviour of the chatbot is determined by the bot itself.

How do Chatbots work?

There are two types of chatbots Rule based bots and AI bots.
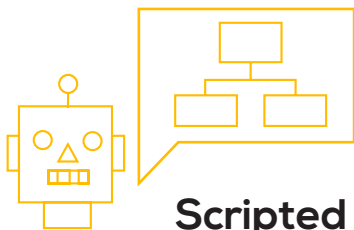
Scripted chatbots

Conversations with this type of chatbot can only follow predetermined paths. At each step in the conversation the user will need to pick from explicit options to determine the next step in the conversation.
This bot is very very limited. It can only respond to very specific commands. If you say the wrong thing, it doesn't know what you mean.
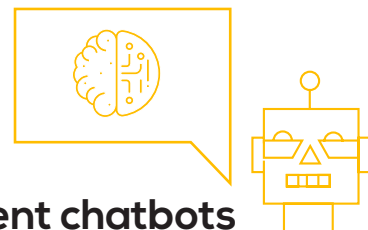
Intelligent chatbots

Artificial intelligence allows them to be more flexible in terms of the user input they can accept. They can accept free form input in the form of text or voice statements.
AI also allows them to improve the more that they are used. This bot continuously gets smarter as it learns from conversations it has with people.

Uses of chatbot

Bot Learning
trains, coaches and accompanies students on an educational path

News Bot
Chatbot who tells you about the news

Brand assistant Bot
Customer support, relationship and after sales service

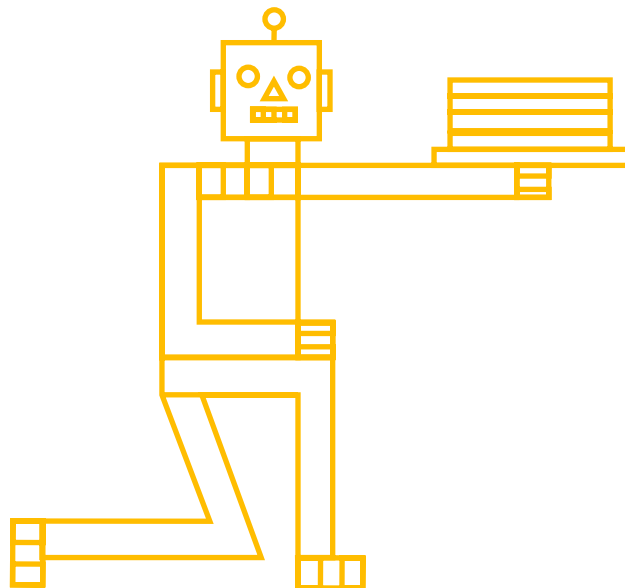### E-commerce bot
sell / advice / recommendations

Entertainment Bot
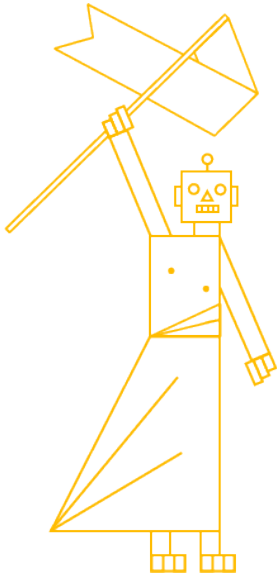outing ideas, exhibition, bar, restaurants

Fun Bot
spent the time, live an experience

september

Chatbots: Revolution or Regression in UX?

Will chatbot be deprecated in a near future? That is the question that many people wonder. Indeed, a lot of chatbots are currently not that useful. Furthermore, they actually needs you to type your question! That's a waste of time. Event bots of big company like Google (with their Google Assistant) can take some time to process your request and answer your question. But it's not all a waste! With the progression of the machine learning, chatbot will become more and more relevant, and they will process our requests faster. It can also be a great asset for company, because they allow gathering of analytics in a more "human way", by talking with a company customer and getting data from their answers.

october

Is chatbot intelligence artificial?

Did you know that they are around 70% message requests made to chatbot that they do not understand? But why is this that difficult for a chatbot to understand our questions? We can answer this question by distinguishing 4 major problems of a chatbot:
- Lack of robustness
- Limited cover
- Setup cost
- Hard to maintain

In a near future, we could address those problems by using Machine Reading. The machine reading is the ability of a bot of understanding the context of a question in his own language, by using complex graph science. It will have a semantic representation of what the used asked, thus increasing his understanding a lot! When it will be ready, it will be a next major step in chatbots history!

The place of chatbot in advertising
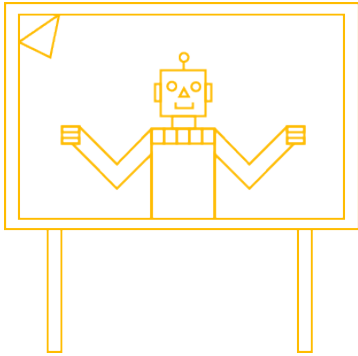
Another great and original usage of chatbot is in the domain of advertising. Arte tried it and nailed it! For their new series "Transferts", Arte made a Chatbot in Facebook Messenger. The chatbot is meant to dive in the user in the plot of their serie. It allows to break the 4th wall by putting directly the user in the serie. During the conversation, we learn that our spirit was graft in another person body.

Thanks to the chatbot we can explore new unique ways of advertising, and we think that it's a great idea and an original way of using chatbot

november

Re:Scam is the scammer email fighting chatbot

some $12 billion is lost annually across the globe thanks to scammers.

To combat the constant flow of malicious messages on e-mail boxes, a New Zealand NGO has created a chatbot that makes swindlers mad.

Dodgy emails can simply be forwarded onto me@rescam.org where a proxy email address will take over and let the Re:scam chatbot go to work.

The flip side to this is that one day scammers could start automating their operations with chatbots as well.
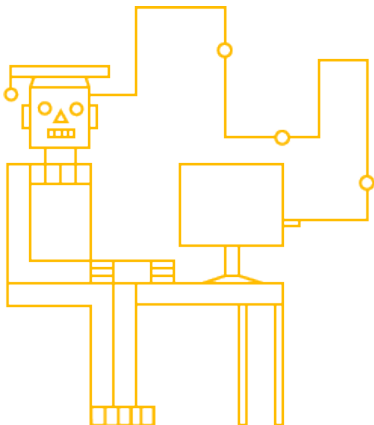
Google's chatbot analytics platform Chatbase launches to public

At Google I/O this year, Google quietly introduced a new chatbot analytics platform called Chatbase, a project developed within the company's internal R&D incubator, Area 120. That platform is being publicly launched to all. The system today integrates with any voice or text messaging platform, Google says, including Facebook, Kik, Viber, Slack, WhatsApp, WeChat, Alexa, Cortana, Allo, Line, Skype, Twitter, and more.

The idea behind Chatbase's cloud service is to offer tools to

more easily analyze and optimize chatbots. This includes giving bot builders the ability to understand what works to increase customer conversions, improve the bot's accuracy, and create a better user experience.

This data is available through an analytics dashboard, where developers can track specific metrics like active users, sessions, and user retention. These insights give an overall picture of the bot's health and see general trends.

# Microsoft announces preview of AI-powered health chatbot system
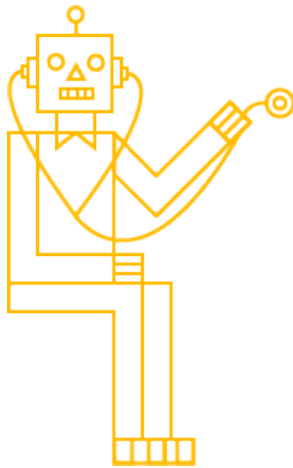
Microsoft's launched a private preview of a new AI-powered health chatbot system. The company said intelligent healthcare assistants could «empower» users to access medical info from their smartphone, cutting the time and cost of obtaining health-care.

The project is being developed as part of Microsoft's Healthcare NeXT initiative. The company's trying to find ways of offering digital healthcare experiences that let user get immediate infor-mation on common ailments.
The smartphone app allows users to determine the level of care needed for their condition. By answering questions provided by the bot, the app can suggest possible causes for the symptoms being experienced. It then presents a judgment on the best pro-fessional healthcare option.
Users can schedule appointments with a doctor from inside the app. The bot provides guidance on the type of doctor needed and how quickly treatment should be sought. It then makes the appointment for the user.

Replika - the First AI Confidant
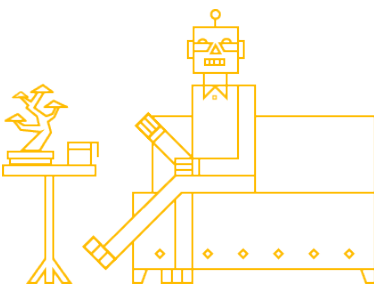
Despite the numerous ways to connect and communicate through social media, people are feeling more disconnected than ever. Replika today responds to that sense of alienation with the introduction of the first AI confidant. More than 1.5 million people worldwide who have been waiting for access can now connect to a readily available sidekick that's part journal, part private sounding board -- and always there to lend a non-judgmental ear.

«We have seen a passionate response from early Replika users,» said Eugenia Kuyda, Replika co-founder. «People open up when they're talking to an AI because they're not pretending to be someone, or trying to impress on social media or in some other social setting. Instead, they want to engage in a way that enables real self-reflection. Digitally speaking, this is the closest thing to our true selves that we experience, and we are now making it available to everyone.»

december

Twitter makes it easier for developers to build chatbots on its platform

The company launched an enterprise API, and took Direct Message tools out of beta.

In April of this year, the company unveiled its Account Activity API, essentially as a way to make it easier for developers to build applications on the Twitter platform, and, on Tuesday, Twitter announced that it is taking the API's Direct Message features out of beta.

With this news, developers will now be able to build solutions with features that include quick replies, welcome messages, buttons on messages, custom profiles and Customer Feedback Cards. Developers will be able to edit their welcome messages, as well use read receipts to let customers know that their messages have been received.

During the beta period, these features were «used to create responses and more engaging experiences,» the company said, meaning, among other things, customer service chatbots.

Some of the companies that have already used these features to create their own chatbots over the last year include Samsung, MTV, TBS, Wendy's, and Patrón.

The other big piece of news is that Twitter is launching an enterprise version of the Account Activity API.
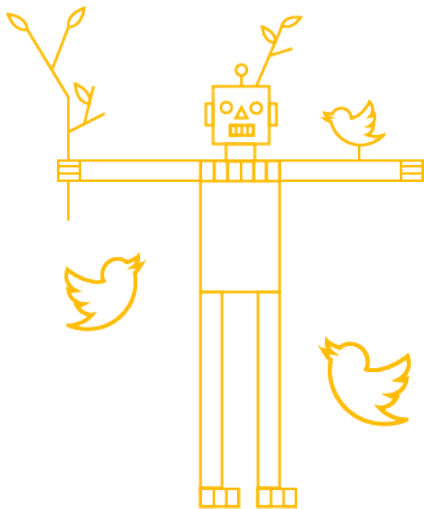
World's first mental health chatbot

For those suffering from anxiety or depression, taking the first step of speaking to someone about it can seem an impossible task.

But a robot therapist could help people with mental health by Facebook Messenger. Researchers have shown that they have been shown to reduce symptoms of depression.

Woebot uses artificial intelligence to create natural, personalised and human-like conversations and offers emotional support to users. Woebot mostly uses questions, such as 'What is your energy like today?' or 'How are you feeling?', encouraging users to openly discuss their emotions.

It can also be suggested that people are thinking about things in their lives. The doctors are available anywhere, and anywhere, offering accessible mental health care to those who need it.

'Woebot' engages in 2 million conversations a week, but some experts have cited privacy fears as chatbot 'patients' are not protected by US confidentiality laws.

Meet Lego's Facebook Messenger chatbot Ralph

Lego has embraced a Facebook Messenger chatbot to help engage fans and aid consumers with gift indecision in the run up to Christmas.

Ralph the giftbot has been created as a guide through the notoriously stacked back catalogue of Lego kits. He was built to give Lego an ecommerce foothold on the social network.

The bot has been developed as a streamlined experience. Ralph the Robot asks users questions like their age, budget, and the type of sets they are interested in. A few seconds later and a slew of kits have been coughed up for purchase, complete with free shipping.

This controlled environment has been designed where user inputs are limited, meaning that Ralph's responses will be solely created to reduce friction from potential purchases on the social network. The tone is broken up with numerous Gifs of the bot in action.

Chatbot for the launch of the new Arte's series

The Franco-German channel challenges its fans to put themselves in the shoes of a complete stranger through his Facebook Messenger account. To immerse future viewers in the universe of the series, ARTE has chosen the entertainment agency Dare. Win and its LiveBotter chatbots developers to create an original experience to meet the characters.

This operation aims to bring the experience of a transfer to life, simply by using a mobile phone. Thus, by sending a message on the Facebook page of ARTE, the subject will be transferred into the body of Sylvain Bernard, the protagonist of the series, and will have to take his place during conversations with his colleagues from the Action Brigade against Illegal transfer. The goal is to answer the questions of the greatest profilers by claiming to be and always have been Sylvain Bernard. Through this experience of a few minutes, the user will navigate between three Messenger conversations and will have to make the right choices to gain access to the first episode of the series in preview.

january
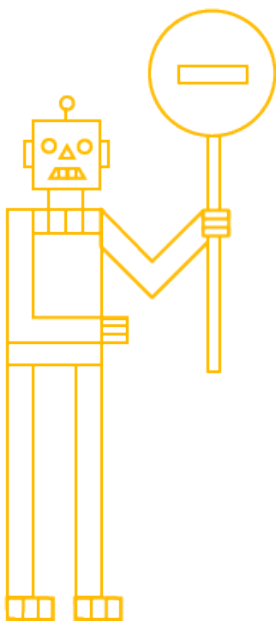
Facebook putted a stop to his messenger bot

"M", the Facebook assistant that users can discuss with on messenger will be removed of the application after two years of service.
This bot was the Facebook's answer of Siri or Cortana and had a specific particularity : "M" was trained by humans.

"M" was present on messenger that is why all users can chat with it to ask answers or to ask to do task for us like book a restaurant or plan an event.

This stop was not perceived like a fail, they learn a lot about users need to create other projects to answer them with the most appropriate manner.

february

How can we make chatbots look more human ? A new idea by Facebook.

To allow a chatbot to make conversation FAIR (Facebook AI Research) developed a deeper learning. Instead of programming questions and answers, the searchers used big data to train the chatbot to talk. This data base, PersonaChat, contains more than 160 000 lines of dialog, extracted from exchanges between surfers of the Amazon Mechanical Turk plateform. The chatbot can't yet do a perfect small talk but the conversation is becoming more and more fluent.

Bots forecast for 2018

A study directed by Oracle proved that 38% of french brands have already used chatbots and this percentage will only increase until 2020 where 79% will have it deployed for the customer relation management. The main question is will chatbot replace instant messaging ?

## Lidl launches online chatbot that recommends wine
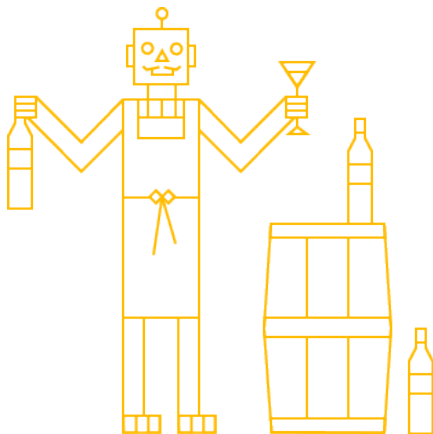
Lidl has launched a quirky new tool in an attempt to improve its interaction with customers, and make the relationship more personal.
Shoppers at home or in store can log in to Facebook Messenger and use a new chatbot that will help them select the best Lidl wine based on their budget or the meal they're having that evening.
The artificially intelligent chatbot – named Margot – can converse with customers who want to «make more confident wine choices and have some fun along the way», Lidl says.
The discount supermarket said the chatbot would answer questions such as "which red wines from Chile under £6 do you sell?", "what goes well with grilled salmon?", or "what makes a wine sweet?".

march

52.7% of the millenials don't know what a chatbot is.

Agency Conversationnel proved with an infography than more than half of the millenials don't know what a chatbot is until someone define them what it is. This study proved that the whole concept of AI is a mystery to the majority of them, and 35.5% affirm that from a chat, they can't tell if the speaker is a human or a robot.
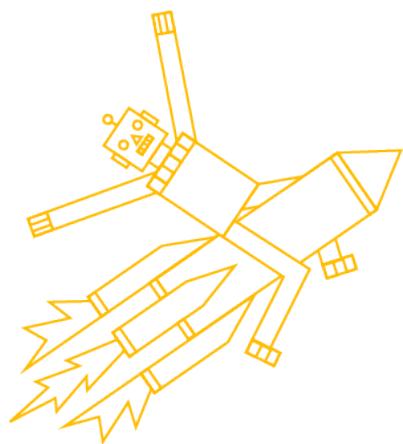
## Do Your Dreams Up intends to propulse its chatbots beyond clichés.

Do Your Dream Up, a french agency pioneer with chatbots, created the « Observatory of chatbots » to identify and understand the main issue of this market. This study has notably highlight the fact that 92% of marketing professionals believe that chatbots will be generalized in their industry.

Chatbot : the new tool for visiting museum

During the exhibition Agoramania in the MAIF Social Club in Paris, the start-up Ask Mona decided to propose a new mediation tool with a chatbot. The start-up created an image recognition system to allow the chatbot to recognize the different paintings or 3D objects.

A chatbot to give a voice to artwork

How to confront artificial thought to the « thought » of artwork, such as the Penseur de Rodin ? It's on this question that have worked BBDO Argentina and the Museum of Modern Art of Buenos Aires (MAMBA). They invented a chatbot that allows the visitors to dialog with the pieces of art exposed in the museum. This chatbot knows every context, story, creator of each work, and tries to communicate it to the visitor.
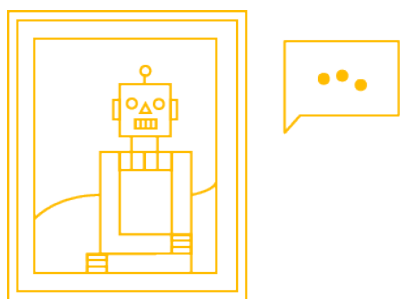
Mr Cedric Villani's report on AI

The famous mathematician and deputy from LRM realized a report on AI, and explains his views on environment, defense, ethic. He encourages a better access to data, a development of research, and an ethic AI. He insists that with certain programs, which reproduce racism and sexism, the lack of mixity in research team, AI can be a subject of concern.

april
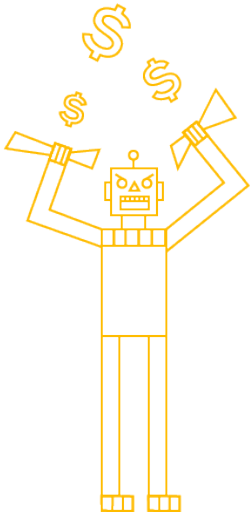
A chatbot that helps you contest your fines.

DoNotPay, WinIt, TurboAppeal are chatbot that help you to contest your fines. Their function are really simple. A serie of question regarding your infraction is asked, and a letter-type is sent to the administration as a ground of appeal. These disputes represent 13 millions of dollars lost to the administrations.

Facebook stops the new apps that wish to join the social network

Resulting the Cambridge Analytica case, Facebook announced an action plan to stop the data leak of users. Facebook is actually reviewing its process of exam of news applications or chatbots. This break is critical to the industries that spent thousand of dollars for new applications that can be used or put online because of this decision. It reminds us that depending on only one platform is dangerous for the launch of a product.
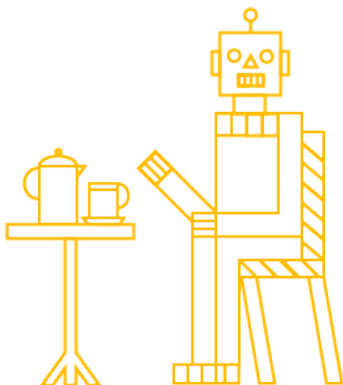
How can we communicate effectively with an A.I. ?

Because a great number of chatbot proved to be irrelevant or disappointing, Les Echos proposed a serie of rules to apply when you are chatting with a bot. It advises you to write correctly, to avoid sarcasm or irony, old fashioned expressions... It is also proposed to talk to the bot the same way you'll talk with a child, that way it can learn and get better.

analyse

That's actually a complex topic, let me answer this step by step

First, I have something called an AI (for Artificial Intelligence). At the beginning, I was able to understand some basic query. But as the technology behind me evolved, I was asked to answer to more and more complex queries.

Thanks to the Machine Learning, I was able to solve more complex queries and understand the context behind a question.

Nowadays, I can provide you with useful informations. At Air France (the french air company), they have a Messenger Bot which serve as your personal traveler assistant. It can remind you your departures, access to your personal account and give you relevant details about your trip! And you can talk to him in a natural language, it will generally understand your query.

But be careful. Machine Learning is not near perfect! Take for example my friend Tay. Because he learn from himself and from what people said to him, he became extremely racist! It clearly show that we need to improve ourself, and even if we can think by ourselves, it doesn't mean that we have an absolute knowledge :)
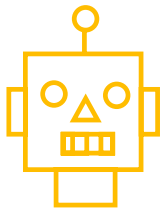
How can you be useful to us, humans?

That's a subjective topic but I'll try to do my best to properly answer it!

Not so long ago, it was very common to call me useless :(, because generally, I was used just for fun and not in any serious mean. An example of a popular chatbot is eviebot. If you try it, you will see that it is generally used to insult my fellow colleague! That was what people thought about us in the past.

But now, things have changed! We are a lot more aware of what we say, what you want. Thanks to the usage of machine learning (like I told you before), we are able to give you more relevant informations based on the context of the conversation!

Sadly for me, I am currently evolving, but at the moment, I'm not that smart. My creators made me without Machine Learning, so it's hard for me to be really aware of the context, but hey! I'll do my best to answer your questions. Try for exemple to give ask me some basic questions like 'What time is it?', 'What's your name' and other secret questions, maybe I'll answer one of them ;)
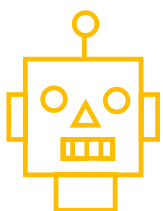
I can barely see myself after my creators passed their oral presentation, but for my fellow colleagues, I see big!

I can see a trend growing. Whereas applications were a must in the 2010s, chatbots are, for me, the next applications. Nowaday, it is extremely common to have a tons of different applications in our smartphone, and each of them accomplish a particular task. But what if we had one chatbot to rule them all?.
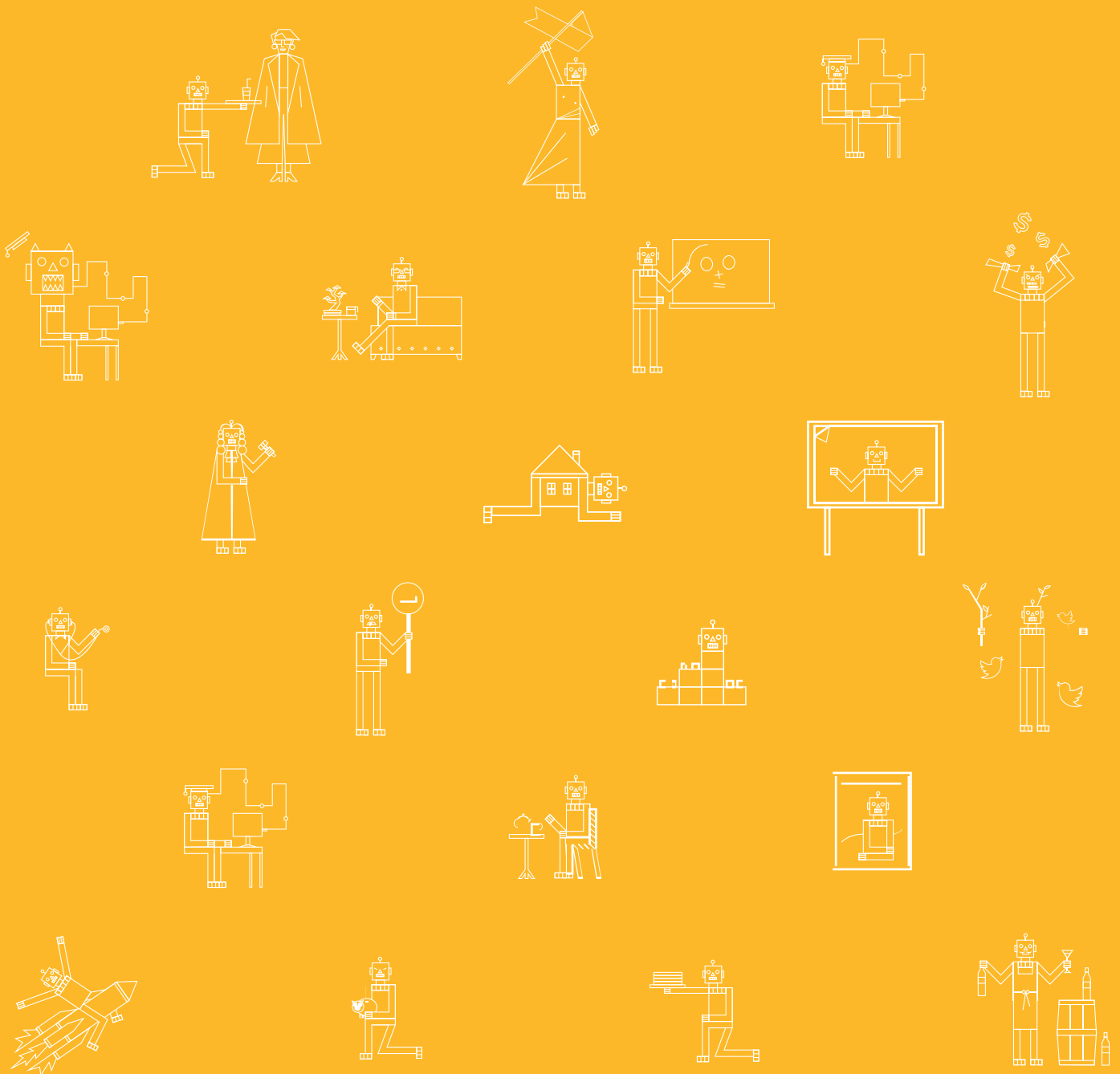
Take for exemple Google Assistant. It can be used to put an alarm at any given time, to set an appointment, to play music, to get various informations about something, to tell you jokes... the list is endless, and is growing more and more as the technology evolve!

So yeah I think that it is not crazy that in a near future, applications could be deprecated, and we are going to rule! (in a nice way of course :))))

Sadly, like I told you, I'm not currently that smart :'(. You asked me everything I knew about chatbots. But hey! You can try to ask me some secrets questions in the chat, maybe I'll answer to one of your questions ;)
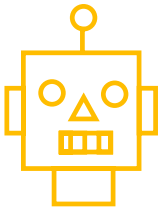
thanks !

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