00:04

It's Monday morning. You've just received a voice notification from your voice assistant.

00:11

Voice assistant: Good morning. There's a new pair of pants on sale at your favorite store. Last week, while wearing your smart glasses, you were drawn to a similar pair on a colleague. Would you like to wear them to the party on Thursday? I suggest you skip the movies tomorrow night to afford them. Say "yes" to validate the purchase. Let me know if I should also find a gift for your host. I can make suggestions based on your budget and her public Instagram profile. Say "yes" to proceed.

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Karen Lellouche Tordjman: Yes.

00:41

So, thrilling or scary? Because this is how our future could look very soon. As a working mom, I find it exciting. I would love to stop doing Google searches, wasting time doing Amazon scrolling, budget calculation or optimizing my calendar. What is thrilling is the prospect of having a companion that would cater specifically to my needs and requests. Just imagine, it could do things, like using my heart rate to tweak my Starbucks order to reduce caffeine. It could take into account my lunch and the number of steps I've walked to tailor a workout for me. It could even align with my friend's smart assistant to craft evening plans that would fit everyone's budget, calendars and locations.

01:42

Obviously, this scenario could easily lean towards the scary. This is why there needs to be regulation in place. All users, all consumers, should always remain in full control of data they share and on which type of recommendations they agree to get or not to get.

02:03

Now, recommendation engines powered by artificial intelligence are not new. Far from it. We actually use them multiple times a day already. On average, 70 percent of the time spent on YouTube is on videos recommended by their algorithm. And you may also own a wristband that you use to track your sleep or monitor your workout. And there's the first generation of voice-

enabled virtual assistants. You know, like Google Home or Amazon Alexa that you can use to change the temperature of your room. Your car as well is probably equipped with the same things that can help you manage your music or give you directions, hands-free.

02:55

But there is one thing that all these tools have in common. They leverage AI to help you in one specific area of your life. Your home, your car, your health. They stay in the lane. Now imagine a new generation of voice assistants that crosses all lanes, that synchronizes everything.

03:24

So you may ask, why hasn't this happened already? Because there are two technological bricks that are critical to make this happen that are still missing. One is voice. These tools must be able to understand everything we say. And clearly, this is not the case today. For my kids, maybe yours as well, Siri is still an endless source of fun. They like asking very simple questions and still get very confused answers. Two, breadth. They must be able to provide a large range of recommendations to cover whatever we may need.

04:09

So tech players are still working on cracking those two elements, voice and breadth. On voice, as I said, Alexa, Google Home, Siri and the likes, they don't understand us entirely and systematically for now. Actually, understanding human language is difficult. It's as much about the context as it is about the words themselves. And think about the accents or background noise. It's already very difficult for Americans to understand French people speaking English,

04:48

(Laughter)

04:49

so can you imagine how difficult it can be for a robot?

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So tech players are working hard on this. In 2018, Google launched an investment program for start-ups that would work with their Google Home suites. And since then, they have invested in

over 15 companies. Amazon has 10,000 employees working on Alexa voice technologies. So they will eventually crack the voice issues. The smart assistants will be able to understand what we say, the meaning of the words in their context. For example, if I'm using my smart assistant, and I'm listening to music, and then I say, "Change."

05:39

VA: Hi, Karen. Do you want to change the temperature of the room?

05:43

KLT: Well, clearly this is not working yet, but in the future, it will understand that I'm talking about changing the track, not changing the temperature of the room. It will also understand our long and complex requests. You know, when we start saying something and then we change our mind mid-sentence. But that doesn't stop here. With far-field speech recognition, you will be able to use it from a distance, from a room to another. Even with background noise like kids screaming or traffic.

06:19

(Kids shout, whistle blows)

06:25

Tremendous progress has been made on this recently, largely due to Amazon's efforts on their Echo speaker technology. Not only that. It will be able to understand in which mood you're in -- joy, sadness, annoyance -- and will be able to mimic these feelings too. And as natural language processing advances further -- so natural language processing is the technology behind this -- so as it advances further, the voice-enabled interactions will increasingly be refined.

07:07

Now, the second challenge and the biggest, in my opinion, revolves around the breadth of recommendations provided. Will they be able to -- What will be their range of actions? Will they remain limited to very specific tasks, or will they be able to become a true companion across your day to which you can ask whatever you want, whatever you need? For example, taking notes in a meeting or reordering milk or even mental health coaching. Will they be able to provide you recommendations across product categories? Today, companies provide us recommendations within one specific category, for example, that can help us choose between

two dresses, between two books. In the future, the smart assistants will actually be able to help us choose between buying a book or buying a dress.

08:10

So to be able to deliver this integrated and large range of recommendations, tech teams behind smart assistants will need to design the right algorithms. And these algorithms will need to be powerful enough to process a myriad of data points. To identify patterns, to model courses of actions, and also to learn from end users' feedback. But, a world where smart assistants become unavoidable means new priorities for all companies, not only the smart assistant players. Every business in the future will need to accelerate drastically on data and algorithm, on voice-enabled interactions. And also, they will need to be entrusted by consumers to provide recommendations. This is what I like to summarize in three words, in the three imperatives that are data, tech and trust. So the moment the breadth challenge and the voice challenge get solved will be a tipping point in smart assistant usage and adoption by consumers.

09:33

Today, can you live without your smartphone? I assume not, right? In a few years from now, your smart assistant will be a convenient, powerful, reliable helper essential in your day-to-day life. So you won't be able to live without it. And unlike your smartphones, it will be embedded in every device around you. Your smartphone itself, of course, but also your car, the mirrors, your fridge, your glasses and who knows what other device in the future.

10:14

So are you ready for a smarter life?

10:17

VA: Yes, Karen, I am.

10:19

(Laughter)

10:21

Thank you.

10:22

(Applause)