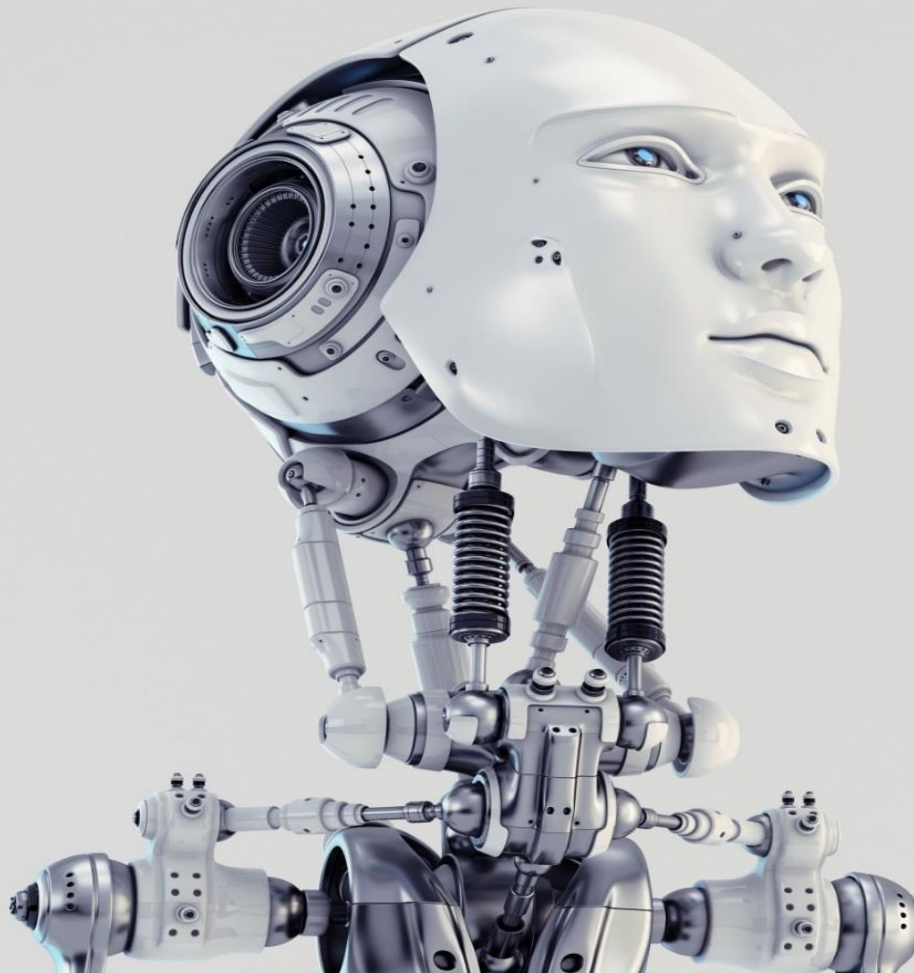




CANADIAN GERMAN CHAMBER OF INDUSTRY AND COMMERCE INC.
LA CHAMBRE CANADIENNE ALLEMANDE DE L'INDUSTRIE ET DU COMMERCE INC.
DEUTSCH-KANADISCHE INDUSTRIE - UND HANDELSKAMMER

TORONTO



Conference Report

“AI Conference in Montreal”

The Transatlantic Dialogue Initiative - Together Into the Future

April 19, 2018, @ SAP Labs Canada
www.germanchamber.ca / www.transatlanticdialogue.ca

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As part of the [Transatlantic Dialogue Initiative](#), which is financially backed by the Federal Ministry for Economic Affairs & Energy of Germany, the Canadian German Chamber of Industry & Commerce Inc. organized a Big Data & Cybersecurity conference on April 19th 2018 in Montreal. The chamber hereby brought over several German experts to Canada in order to discuss relevant topic within the field of Artificial Intelligence together with Canadian experts during three panel discussion rounds. The three topics of interest which were discussed were “1. *Human-Machine Interaction*”, “2. *AI & Ethics*” and “3: *Improving Energy Efficiency through AI*”.

This report outlines the different conversations and its key discussion points made between the Canadian and German panel participants.

Panel 1: Applications in online marketing - How will AI impact and shape consumer behavior?

On the first discussion panel Pierre Guillemain (CEO & Founder of Aivy), Ari Himmel (Founder of Faimdata) and Thomas Jelonek (Founder of envision.ai) discussed the topic “AI applications in online marketing - How will AI impact and shape consumer behavior?” Stefanie

Dreyer (TV-Presenter, Journalist and Economist) moderated the panel.

Consumer data in the digital age

The [Cambridge Analytica scandal](#) and the mishandling of personal data of Facebook users displayed how a series of bad decisions can lead to very serious data protection law breaches. This has alienated users and led to an erosion of trust amongst the public. However, the Cambridge Analytica scandal also managed to raise awareness on what can go wrong with handling personal data and that users need to be more precocious, as third parties might access and mishandle it. This also means a setback for data collecting companies, as it might lead to the introduction of stringent regulations for handling personal data by the regulatory bodies.

This ties in with another problem which data analysis companies face: the incompleteness of datasets and how to make sense of the bits and pieces of consumer data. Wherever it is not possible to get other data, companies need to focus on enhancing the quality of data, trying to make sense of data from non-traditional sources and try to develop more sophisticated tools to filter out the relevant data from the masses of ‘noisy data’ available.

More companies in sales will use AI to better track individual costumers, tailor marketing to their individual preferences and thereby streamline financial performance. Future trends will become even shorter. On Instagram you see fashion items appear and disappear every day now. Therefore there is a need for developing technology for faster promotion and smarter recommendation. The question is how consumers will be able to keep up, as there will be an overload of information. In the short-term these changes will happen in the background, where consumers will not notice the improvements in marketing targeting. Younger generations will grow up with these enhanced marketing technologies and take them for granted. Machine-human interaction will be part of our future reality and seen as natural.

Who controls data?

A point which needs consideration will be the location where consumer data is acquired, where it will be processed for analysis and which countries it will pass through during this entire process. The EU's [General Data Protection Regulation](#) will protect consumer data, however, it will represent a challenge to companies handling and analyzing data depending on the jurisdiction which will apply, as there are such vast differences between countries and continents in the legal frameworks. In China for example there

are no laws protecting personal data privacy, whereas the USA has some laws which protect user data. Europe currently has the most advanced data privacy laws in place with the GDPR. This will cause a challenge to companies which handle personal data globally.

Finally, there is also the question whether AI can make the right decisions. For routine tasks, AI is already very much capable of making better decisions compared to humans. However, if AI only has a limited data set, it can only give recommendations and make limited decision, but it's not necessarily the best possible and humans still outperform technology when only limited data and information is available.

Panel 2: Image recognition technology and AI - What are future possibilities, opportunities and challenges?

The second panel discussion had as speakers Craig Buntin (Co-founder/CEO of SPORTLOGiQ), Sheldon Fernandez (CEO of DarwinAI), Sebastian Kielmann (Managing Director at picalike GmbH), Roland Memisevic (Co-founder at Twenty Billion Neurons GmbH) and was moderated by Vaughn DiMarco (CEO of Montreal AI Consultancy). The topic of the discussion round was "Image recognition technology and AI - What are future possibilities, opportunities and challenges?"

Expectations and AI

Looking back at how AI is perceived and what its capabilities are for solving problems, it must be said that in the past six years there have been noticeable changes. One of the major breakthroughs happened in 2012, where a machine translation researcher found a method with the help of algorithms to very accurately translate from most major languages to each other. In the future there might very possibly be more of such 'shock moments' within AI research.

As one of the panel participants stated: "everyone now started dreaming about AI being able to solve nearly every problem humanity has. This has even led to the case that there is now a gap between what AI can deliver and what humanity, especially investors, expect." Some experts even draw parallels to the early 2000s dot-com bubble, where the misalignment of the capabilities of the internet and investors' expectations caused the crash of the entire e-commerce industry. This misalignment of expectations is also sometimes referred to as the 'hype cycle' for new technologies. This cycle has the shape of a horizontal s-curve, where we're still at the very beginning of this curve and have to carefully manage (too high) expectations. These high expectations and the break-through in several of the technology sectors (autonomous cars,

drones, language recognition etc.) have caused a dramatic and exponential increase of investments into AI research.

An all seeing eye - China

China is currently at the center of AI and image (face) recognition technology debates. The government of the People's Republic is experimenting with cameras which can spot jaywalkers and publically shame them on screens, find fugitives, track people's regular hangout spots, and predict crime before it even happens. The leading solution provider for the hereby utilized technology is a company called [SenseTime](#).

Even though SenseTime's capabilities are impressive and groundbreaking, there are major concerns with privacy laws. In the West the current developments in China are seen as the early stage of an Orwellian horror scenario where an all seeing eye controlled by the government uses AI to discipline critical citizens. This is where society in Canada is much less concerned than Germany. The deployment of image recognition technology in form of tracking, labelling and tagging of individuals and items in public is much more accepted in Canada. As one of the panel participants from Canada put it: "monitoring consumers in stores will become usual. However, we need to discuss in more detail how we can better include the ethical aspect."

Panel 3: AI automation and employee replacement - What precautions can be taken to avoid sector specific unemployment?

The final panel discussion had as participants Felix Georg Müller (Group Manager for Autonomous Production Optimization at Fraunhofer IPA), Eirini Psallida (Co-founder of KEWAZO), Wen-Fang Xie (Professor for Mechanical, Industrial and Aerospace Engineering at Concordia University) and Nathan Zylbersztejn (Founder of Mr. Bot). The discussion was moderated by Abhishek Gupta, who is an AI Ethics Researcher at McGill University.

Welcome to the new economy

There has barely been any automation in many industries. In fact, many of them currently use methods which are more than 100 years old. Especially tasks which are undesirable and dangerous will be carried out by intelligent robots in the future. Employees' time will be freed up for working on tasks which are more meaningful and safe. Some jobs will indeed be lost through automation and in this regard we have seen two dominant reactions from society: interest and revolt.

More jobs will be created than lost through automation. Repetitive low-skill jobs will likely be replaced by some sort of automation. Especially in the customer

service industry and hospitality industry there is huge untapped potential for automation. However, many highly complex and well-paying jobs will be created at the same time. Some industries - especially those who now have to pay the minimum wage - will depend on automation for their own survival. One of the benefits will also be that employees will have more time to do meaningful tasks in their jobs and focus on more creative aspects.

With each industrial revolution old jobs are destroyed and new ones are created. This always causes resistance to some degree by the parts of the workforce which perceives to be threatened by the emergence of a new technology. History has shown that technology moves faster than the ability of society to adapt to the new reality, causing a gap to emerge throughout the transition process.

The government hereby needs to support the workforce to adapt and integrate into the new digital economy. The workforce of tomorrow needs to continuously learn new things and re-educate themselves to stay ahead of automation. Especially younger generations which will enter the workforce in the future need to be encouraged to get involved with the technology sector. This will lessen the likelihood of them losing their job through task automation led by innovations in AI.

END

This conference was part of the [Transatlantic Dialogue - Together Into the Future](#) initiative. The [Federal Ministry for Economic Affairs & Energy of Germany](#) together with the [Canadian German Chamber of Industry & Commerce Inc.](#) have called into life this initiative in order to strengthen the cooperation between Canada and Germany on the field of Big Data, Cybersecurity and AI. The goal of this initiative is to facilitate the exchange of best practices, concepts, new ideas and the creation of a new network between both countries, thereby creating a platform which fosters innovation. Innovation means progress, and only through progress can we create the future.

This six conferences long series will take place at different locations across Canada (Ottawa, Montreal and Toronto) and Germany (Karlsruhe, Dortmund and Berlin). Each of the conferences will have three panel discussions about sub-topics within the field of Big Data, Cybersecurity and AI. We will hereby organize a delegation with experts to the host country in order to vividly discuss the topics of interest at each conference and show the participants for a week what the other country has to offer in this area.