

# ARTIFICIAL INTELLIGENCE & DATA SCIENCE



TUESDAY

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BRATISLAVA

Slovak University of Technology, FIIT, Ilkovičova 2, Bratislava

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Artificial intelligence (AI) is no longer an abstract fantasy from science fiction. In fact, it is not even something limited to futuristic discussions. It has become the reality which is slowly altering our everyday lives and has the potential to transform entire industries in the near future.

However, as with any other trend characteristic for the digital age, the changes are happening at a fast pace and those who will be ready to adapt will profit, while those who won't will lag behind. This is true for countries, organizations, businesses and even individuals. This potential to transform industries, economies and social ecosystems at the global scale thus presents numerous challenges which need to be addressed at the national level.

This is especially true for Slovakia, as according to a recent OECD study published in April, it is likely to face the most dramatic transformation of its labor market of all developed economies. The ongoing fourth industrial revolution, characterized by the current trend of automation and data exchange in manufacturing technologies, will make many existing positions redundant.

AmCham has recognized the crucial role AI will play in the transformation of the Slovak economy in the next decade. Earlier this year, AmCham has established AI-SK (Artificial Intelligence Platform in Slovakia), which aims to gather key stakeholders to unite and harness AI perspectives. The AI-SK is designed to interconnect academia, business and policy makers in a structure that

ensures balanced governance of AI developments. Through its activities, AI-SK platform aims to serve as an open platform for discussion and engagement about AI and its influence on people and society. This conference, held at Slovak University of Technology, FIIT, was a direct result of these ambitions.

The conference featured international and local AI experts, who highlighted the untapped opportunities of applied AI and shared emerging best practices and future AI trends. The program was divided into three discussion panels which offered three interesting perspectives on the current use as well as future potential of AI. The first panel entitled "AI Applied Enterprise Stories" featured a selection of speakers from the business sphere representing companies

which are at the forefront of implementing AI into present-day technological solutions.

The second panel took a closer look at the role of government in the digital era and how, with the right approach, Slovakia could capitalize on the existing AI opportunities. The discussion was preceded by an introductory note by Richard Stirling, CEO, Oxford Insights, on "Government AI Readiness Index". In his speech, Mr. Stirling stressed the importance of the tasks awaiting the Slovak government in relation to the expected workforce shift. He identified three main questions that the government needs to address promptly. Firstly, it needs to decide how to manage this transition in the economy. The second step is to deal with the questions of data ethics and AI regulation,



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Senior Manager on Robotics & AI in CEE Region, Accenture



ideally coming up with its own solutions suited for Slovakia's specific needs, not just importing solutions from abroad. And thirdly, perhaps the most crucial question from the government perspective —how can AI help deliver better services to the public?



**The most fruitful collaborations are those where the company creates its own temporary research lab at the faculty peopled with students and has them working on specific problems.**

The third panel focused on the existing academia research in AI, as well as the business-academia cooperation in this field. Mária Bieliková, Dean at the Faculty of Informatics and Information Technologies, warned that research at universities was in grave danger mostly due to the continuing lack of people in the ICT sector in Slovakia. If the research centers at universities were to disappear, the consequences would be dire not just for academia but even more so for the business sphere.

However, she was very satisfied with long-term cooperation with the business sphere established over the last few years. As she added: "The most fruitful collaborations are those where the company creates its own temporary research lab at the faculty peopled with students and has them working on specific problems."

Thanks to a cooperation with the Delegation of the European Commission in the Slovak Republic, the program also featured a video message by Juha Heikkilä, Head of Unit of Robotics and AI, DG Connect, EC, who introduced the main points of the recently launched Artificial Intelligence Strategy of the European Union.

A day full of discussions and interactions between representatives of the academia, the public sphere as well as the private sphere demonstrated that AI is a topic whose importance is recognized by all major stakeholders. The boost and inspiration provided by the conference may help the creation of new projects and collaborations. However, in order to improve Slovakia's chances to use the potential AI offers, these positive impulses need to translate into a more dedicated and systematic effort on all fronts. AmCham's AI-SK platform, for one, will surely remain active in pushing the agenda and creating new connections and opportunities for collaboration.

 For more pictures and presentations visit [www.amcham.sk](http://www.amcham.sk)



**PANEL I: AI Applied Enterprise Stories**  
From left: **Ivo Gavenda**, Robotics and AI Senior Manager in CEE Region, Accenture; **Juraj Rosa**, CEO, GoodAI Applied; **Jay Natarajan**, Global Senior Solutions Architect, Microsoft; and **Julius Oboril**, Cognitive Process Transformation Leader, IBM Slovakia



**PANEL II: Role of Government in the Era of Exponential Technologies**  
From left: **Peter Kolesár**, Board Member, AmCham Slovakia; **Richard Stirling**, CEO, Oxford Insight; **Mária Bieliková**, Dean - Faculty of Informatics and Information Technologies; and **Fridrich Matejčík**, Country Leader, IBM Slovakia



**PANEL III: Academia AI Research / AI Business - Academic Cooperation**  
From left: **Ivana Budinská**, Director of the Institute of Informatics, Slovak Academy of Science; **Peter Šinčák**, Head of Department of Cybernetics and AI, Technical University of Košice; **Igor Farkaš**, Department of Applied Informatics, Comenius University; **Vladimír Buzek**, Fellow of the Research Center for Quantum Information, Slovak Academy of Science; **Peter Lacko**, FIIT STU; and **Vladimír Hlaváček**, Accenture

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**MICHAL HUDEC**

Financial Systems and ERP Controlling Manager



**Where do you see the potential for further integration of AI at your company in the near future?**

We have already started working on an improved concept of AI and we closely follow the development at other companies. We are trying to implement the bot system to our processes, in the form of bot personal assistants. Daily inquiries from our clients regarding their orders or invoicing could be handled by this system instead of our employees.

I can also imagine AI taking care of the first screening of potential candidates invited for a job interview at our company.

Having an AI element capable of leading a conversation but also able to take care of the work typically perceived as a "nuisance". This is a big challenge as it would need to be able to fulfill the customer's expectations, constructively solve problems, or give the required information.

**Which developments in AI do you find the most interesting outside your area of expertise?**

Personally I appreciate the work done by Google, which also makes many of its products available for free. Today, I dare to say that there wouldn't be programmers without Google. Their systems are already tuned to the needs of

the users; some of them can already communicate with you independently.

This opens up other questions about ethics, or whether a country will allow self-driving cars navigating without human input. Who will take responsibility in case of an accident? The software itself, the developer, the company, or the person sitting in the vehicle? And should these systems possess this power at all? I'm curious myself what will come in twenty years...



**FRIDRICH MATEJÍK**

Country Leader



**Where do you see the potential for further integration of AI at your company in the near future?**

The field of AI offers various perspectives. Machine learning is one example. If we want to develop a self-driving car, it has to be shown all the road signs thousands of times. If the machine is to learn them, it needs to possess a certain computing power. IBM offers solutions which shorten the machine learning time as well as the infrastructure platform necessary for AI.

At the moment, we're also developing our own quantum computer. We want to focus mainly on the possibilities of connecting it with Watson, our software AI. The computing

possibilities, the speed and the power are at a different level than those of ordinary computers or servers. In the next few weeks we are planning to finalize the delivery of the most powerful supercomputer in the world, which will also be adapted to machine learning. Further upgrades are enabled by the software platform.

Of course, there are many other topics. However, we expect that the systems themselves will be able to learn and thus deliver added value to the currently available solutions.

**Which developments in AI do you find the most interesting outside your area of expertise?**

Personally, I am fascinated by the possibilities of connecting AI with supercomputers. Although AI has become a big topic, we're still far away from the "Terminator" movie. For now it's still just a machine which needs to learn certain sets of patterns and can't do anything beyond that. I'm very curious if one day we'll be able to create a machine or a computer conscious of its own existence.

The development is advancing at a crazy pace and the quantum computer will represent a big leap for mankind. It will be a huge thing in IT, especially if it's put to commercial use.



**ŠIMON SKRAK**

Senior Manager for Accenture Digital and Applied Intelligence in Central Europe, Accenture



**Where do you see the potential for further integration of AI at your company in the near future?**

Accenture is already an AI-based company. We see AI as the single most disruptive technol-

ogy the world has experienced since the days of the Industrial Revolution. Accenture invests in and applies AI across our five businesses (Strategy, Consulting, Digital, Technology, Operations), which continuously harvest new insights and capabilities from our Accenture Innovation Architecture. We believe that there are three key areas where AI will create new value for businesses: (1) Reimagine Business Models and Processes; (2) Transform Relationship between Human and Machines, and (3) Unlock Trapped Value of Data. While we believe that some jobs will be displaced due to AI, it will also create new categories of jobs to create, train, and maintain AI systems. Machines offer strengths and capabilities that are different from – but crucially complementary to – human skills. We believe that AI represents an entirely new factor of production that enables

people to make more efficient use of their time and do what humans do best – create, imagine and innovate new things.



**IVO GAVENDA**

Senior Manager for AI and RPA in Central Europe, Accenture



**Which developments in AI do you find the most interesting outside**

**your area of expertise?**

We refer to these developments as "responsible AI". As AI grows in its capabilities—and its impact on people's lives—businesses must move to "raise" their AIs to act as responsible, productive members of society. Just as parents hope to raise children who act responsibly and communicate effectively, businesses now need to "raise" their AI systems so that they reflect business and societal norms of responsibility, fairness and transparency. Take for example Audi. Audi is among the auto manufacturers taking a lead in autonomous driving. The company recently announced that it will assume liability for accidents involving its 2019 A8 model when its "traffic jam pilot" automated system — which can completely control driving on up to 60 kilometers per hour on a divided highway — is in use."