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5 KEY TAKEAWAYS

The Latest Challenges in AI | The LeadershipGarage Experience: Inside Silicon Valley

Kilpatrick Townsend partner Rich Christiansen recently presented to the LeadershipGarage, a group of German Business leaders, and the German American Business Association in San Francisco on the topic of "The Latest Challenges in AI | The LeadershipGarage Experience: Inside Silicon Valley."

Key takeaways from the presentation include:

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AI will be an integral part of any data based technology in the near future. Kilpatrick Townsend's unique Patenting Trends Study 2019 shows a steep increase in AI patent filings in the US. In comparison, the number of filings in therapeutics and building materials have remained at a steady level, and the filings in fintech and clean tech have decreased.

In AI, the leading filers are focusing on development of AI as a tool, for example, development of knowledge based-systems and machine learning systems including classifiers, clustering, neural networks, pattern recognition, predictive analysis, and support vector machines. The smaller AI filers are targeting industry focused applications of the AI technology – how they can use the AI to solve their industry specific problems. The most common applications of AI relate to computer vision, speech processing and natural language processing. Other common applications include entertainment, robotics, healthcare, fintech, digital marketing, automotive, education, cognitive security and augmented or virtual reality.

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Worldwide, by far the most patent application relate to machine learning technologies, the largest portion of which pertain to neural networks. The most rapid growth in AI filings is taking place in deep learning and there are some signs that filings in bio-inspired approaches are about to rise.

The list of the entities that have filed the most AI patent applications is headed by IBM, Microsoft and Toshiba, but includes numerous Asian companies as well as three Chinese universities. China has surpassed the United States and is now the largest annual filer of AI patent applications, with most of these filings occurring in China. Of these vast Chinese AI filings, a relatively small percentage are actually being granted,

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annual filer of AI patent applications, with most of these filings occurring in China. Of these vast Chinese AI filings, a relatively small percentage are actually being granted, and also relatively few are being filed outside of China. China's leadership in AI filings indicates a high level of AI development activity in China, but these numbers are likely inflated by governmental subsidies and government policy favoring patents.

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Interesting questions that were discussed were whether AI will ever be able to replace or surpass human intuition, emotional intelligence and interaction that is required for successful teams. Also, with AI becoming more available and adding to the available skillsets, will AI make it more difficult to patent an invention, which requires an improvement that exceeds the "level of ordinary skill?" And finally, if an invention is conceived using AI, is the computer the inventor, the person who developed the AI system, or the person or entity running the AI to create the new invention?

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