

Press release by MPDV

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I Interview on artificial intelligence in the production of tomorrow

Mosbach, December 12th, 2019 – Together with PerfectPattern MPDV has founded the subsidiary AIMES (www.ai4mes.com). The objective of AIMES is to develop software components for Artificial Intelligence (AI) in production and bring them to the market. In the interview Thorsten Strelle, Vice President Products & Consulting at MPDV and Managing Director of AIMES, and Fabian Rüchardt, CEO of PerfectPattern, talk about the cooperation and why AI is pioneering manufacturing.

How did the cooperation between PerfectPattern and MPDV come about?

Mr. Rüchardt: Actually, it was kind of a blind date. We have decided internally that we want to bring our solutions to a wider market. So far we have mainly been active in the printing industry. Therefore, I started to look for a partner in LinkedIn and found MPDV. Without thinking long, I wrote to a member of the product management team and in the next moment I was sitting in the meeting room at MPDV in Mosbach.

Very interesting. And what happened next?

Mr. Strelle: During the discussions, we soon realized how well our products complement each other. PerfectPattern has the know-how and algorithms to analyze production data and predict events. We know the manufacturing IT market, have customers in all industries, and have the data collection systems PerfectPattern needs to predict future production events. So it was obvious that we have to form a partnership.

What are the objectives from AIMES?

Mr. Strelle: Our objective is to bring AI solutions to manufacturing companies and support them on their way to the Smart Factory. Whether chemical, plastic or metal: companies from all industries benefit from AI. With our solutions, we want to make a significant contribution to this.

What can manufacturing companies achieve with AI?

Mr. Rüchardt: IT systems make the production transparent. For example, they show which system produces too much waste or which machine requires maintenance in the near future. Then humans can make decisions based on this information. With AI, we are in the position to make reliable predictions about future events. Soon-to-be, systems will automatically deliver proposals for decisions using AI and then carry out the action independently.

Mr. Strelle: I would like to outline an example from daily working life. There are a lot of processing steps when producing a part. Let's say, an engine block being cast. There are quite a few parameters to monitor during the casting process. However, it still happens that the engine shows defects after numerous other processing steps. By analyzing these effect chains with AI, I can already predict during casting and based on experience that the block will be highly likely to be scrap based on experience. This means that I can decide at an early stage whether to terminate the production process, which saves me time and money.

What do you see as AI?

Mr. Rüchardt: AI is the ability to solve unknown problems. By this we mean the ability to adapt to a changing environment, to draw conclusions independently and to make decisions. To automate this as a whole enables us to react during the process. That's the difference with AI.

Mr. Strelle: The AI based IT will replace the classical IT in the long run. The increasing level of detail and the gigantic amounts of data can no longer be processed using conventional methods. We need self-learning systems to master the masses of data we have in production and to draw the right conclusions.

What are the challenges for AIMES?

Mr. Strelbel: First of all we have to generate public acceptance for the subject. Because with AI in production it is like with driver-less cars: people are skeptical. Does it work reliably? Can I trust technology?

Mr. Rüchardt: Exactly. It is therefore our task to explain and clarify what the machines do and what improvements can be achieved with AI.

What is the AIMES team currently working on?

Rüchardt: We are working on technologies to analyze historical data for the control and planning of production processes. This includes machine data or status data. We analyze what is produced when, where and in what quality and, on this basis, identify insights into relationships, dependencies and causes. We do not do this by pushing information back and forth manually, but at the click of a button. We automate the data analysis. A predictive planning is possible based on this information and therefore, processes can be optimized and costs can be reduced.

Mr. Strelbel: First tests have shown that you can improve lead times by up to 25 percent. Currently, we are integrating the solution by PerfectPattern into MPDV's software. We presented the first results at our HUG user conference in September and the first applications will be available by the end of this year.

What do you expect that the future brings?

Mr. Strelbel: AI is a crucial success factor for companies on the way to the Smart Factory. We would like to shed light on the subject and create awareness. That's why everything we do revolves around customer benefits.

Mr. Rüchardt: Our goal is to be an innovation driver and to use AI to put manufacturing companies on the right track to the Smart Factory so that they can shape their future profitably.

More about Artificial Intelligence at <http://mpdv.info/praimeski>

More about AIMES at <http://mpdv.info/pmaimes>

About PerfectPattern

PerfectPattern (www.perfectpattern.de), the technology and software company based in Munich, was founded in 2012. The company develops software solutions that combine mathematical algorithms for process optimizations with Artificial Intelligence. Their solutions enable automatic planning of any production process in real time. This makes the smart factory a reality. Three basic objectives are pursued: Flexibility, on-time delivery and reduction of production costs.

With PYTHIA and CORTEX PerfectPattern has developed two revolutionary AI technologies. PYTHIA is a platform product for pattern recognition, time-series prediction and anomaly detection in real-time data streams. Through the innovative combination of methods, including deep learning, stochastics and quantum field theory, it independently finds even the most hidden patterns. CORTEX is a decision-making technology, which makes decisions based on the global objective functions by means of reinforcement learning.

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Pictures



Together, they are driving the development of Artificial Intelligence in manufacturing: Thorsten Streb (left), Vice President Products & Consulting at MPDV and now also Managing Director of AIMES, and Fabian Rüchert, CEO of PerfectPattern.

Image source: MPDV

Keywords

MPDV, AIMES, Perfect Pattern, Cooperation, Thorsten Streb, Fabian Rüchert, Artificial Intelligence, AI, AI Solutions, Manufacturing IT, Algorithms, Forecasts, Analyses, Smart Factory



About MPDV

MPDV, headquartered in Mosbach/Germany, is the market leader for IT solutions in the manufacturing sector. With more than 40 years of project experience in the manufacturing environment, MPDV has extensive expertise and supports companies of all sizes on their way to the Smart Factory. Products such as MPDV's Manufacturing Execution System (MES) HYDRA or the Manufacturing Integration Platform (MIP) enable manufacturing companies to streamline their production processes and stay one step ahead of the competition. The systems can be used to collect and evaluate production-related data along the entire value chain in real time. If the production process is delayed, employees detect it immediately and can initiate targeted measures. More than 800,000 people in over 1,250 manufacturing companies worldwide use MPDV's innovative software solutions every day. This includes well-known companies from all sectors. The MPDV group employs around 480 people at 13 locations in Germany, China, Luxembourg, Malaysia, Singapore, Switzerland, and the USA. Further information: www.mpdv.com.

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