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Data scientists at Volkswagen work on the predictive analysis of large data volumes

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- **Logistics and flows of goods, key data and consumption figures — data scientists at Volkswagen interpret huge data volumes**
- **Predictive analysis is to make corporate processes even more efficient**

Wolfsburg, June 26, 2018 – Digitalization and networking are creating more and more data: Big Data. The data are only useful if you can "read" or interpret them. At the Volkswagen Group, specialists like Gabriele Compostella are working in this area. At the Group IT Data Lab, he is part of a team using human reasoning to analyze big data with the support of artificial intelligence. Their predictive analysis helps make many procedures and corporate processes even more efficient and sustainable.

Data scientists and AI research workers cooperate at the Group IT Data Lab.

Gabriele Compostella is a data scientist with Volkswagen.

Gabriele Compostella is a data scientist at the Volkswagen Group IT Data Lab. Scientists like him analyze and interpret huge volumes of data. At the Data Lab, Volkswagen's competence center for artificial intelligence (AI) in Munich, a team of several experts is working on this task. "Our work is like a jigsaw puzzle," says Compostella, who was born in Italy, smiling. "We have many, many pieces but we can only obtain a clear picture by putting them together in the right way."

Compostella joined Volkswagen after many years of scientific research, for example at the Fermilab particle accelerator near Chicago, the Max Planck Institute for Physics in Munich and the CERN particle accelerator in Geneva. "Working on scientific data is extremely exciting but it is even more exciting if your work brings practical benefits," he says.

In their work, Compostella and his colleagues are not concerned with personal data but with the data generated by the Volkswagen Group with its complex corporate processes every day. This includes, for example, logistics and the flow of goods, key financial figures, demand figures and consumptions right down to the smallest level. "To recognize the big picture, you need a systematic approach," Compostella explains.

And why is this work necessary? "Data can help find the right answers to questions on the basis of facts," says Compostella. In this case, he is concerned with future-oriented questions. The technical term is "predictive analysis". Compostella gives an example: how will demand for an equipment line and the supply situation develop? What components and parts will have to be where and when? Is it possible to identify trends? For a globally active industrial group like Volkswagen, the answers to these questions are very important for making processes and procedures even more efficient and sustainable.

It would be beyond the powers of any individual human being to analyze and interpret huge data volumes in a meaningful way. This is why data scientists like Compostella cooperate closely with artificial intelligence experts at the Data Lab. "No one can complete a jigsaw puzzle with hundreds of thousands of pieces," says the 40-year-old. "This work is carried out for us by machine learning systems we have developed specifically for the purpose." The teams feed these algorithms with data, have them analyzed, combined and use them to draw conclusions – and make corrections where there are errors. This process is called "Supervised Machine Learning".

"Our company has always had this information and data but we have only had the technological capabilities needed to link different data sources for the past few years," says Compostella. At the Data Lab, the specialists are also experimenting with data analysis of traffic flows. In a joint effort with cities, they want to test how urban traffic can be optimized using intelligent data analysis – a puzzle in motion, and a new and exciting challenge for the team: "The more complex the puzzle," says Compostella, "the more fun it is for us!"

Note to editors:
- This text and photos can be downloaded at: www.volkswagen-media-services.com.
- You can find a detailed portrait of Gabriele Compostella at https://www.volkswagenag.com/.

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