

**Data-driven Analytics for
Assembly Process Discovery and Benchmarking at
Volkswagen AG**



We were looking for an AI toolbox that could be used for natural language processing in assembly processes to realize ergonomic, time, and cost efficiencies.

Altair RapidMiner's low code, no code solutions and its compatibility with Python helped us to quickly built data and text analysis processes that are visual and easy to understand. Every assembly step description, no matter the language or slang words used, now is machine readable and can be mapped to unified product component codes and action codes, so that they become comparable across our factories worldwide.

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VOLKSWAGEN

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Data-Driven Analytics for Assembly Process Optimization

Challenge

A car has ~30,000* parts and Volkswagen AG has thousands of assembly plans for similar assemblies, documented in many different languages. Relying on existing assembly knowledge to decide which assembly process is the most efficient is time consuming and cumbersome.

Solution

Altair® RapidMiner® converts unstructured data into useful data by processing natural language and turning it into unified process language. This makes assembly steps and plans comparable across production lines and factories worldwide.

Value

With Altair RapidMiner each assembly step description becomes machine readable and data and text analysis processes are visual and easier to understand. This helps to leverage synergies between different assembly lines and to share and distribute knowledge to optimize assembly processes.