Do Machine Learning and Data Mining Have to be Complicated and Expensive?

SAP HANA PAL – intelligent support for your company

What is SAP HANA PAL?

The SAP HANA Predictive Analytics Library (SAP HANA PAL) is a collection of machine learning algorithms that can be executed directly on an SAP HANA database – entirely without installing additional software. They profit greatly from the performance of the HANA technology, which makes it possible to execute even complex algorithms with large quantities of data without problems.

Technical requirements

In order to be able to use the SAP HANA PAL algorithms, a few prerequisites must be fulfilled:

1. The SAP HANA Platform and SAP PAL have to be the same version.
2. The application function library that the PAL includes has to be installed.
3. The script server on the SAP HANA instance has to be activated.

Fields of application for SAP HANA PAL

The SAP HANA PAL provides various functions for predictive analytics and data mining. These can be called and executed directly in SAP HANA since they exist as SQL procedures. The algorithms are executed directly on SAP HANA, which is why no additional software or servers are required. This means that no export or import of data is required.

Modeling in SAP HANA PAL

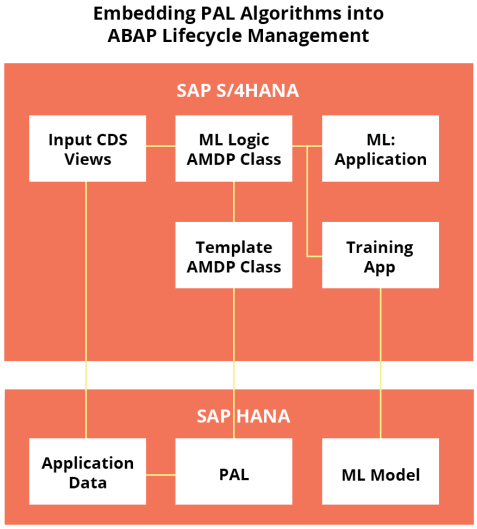
Modeling can be done completely in SAP HANA Studio or using the WebIDE. Since HANA 2.0, so-called flow graphs are available, which are created with drag & drop processes and variables. The procedures and tables can be created automatically or by hand using SQL. The results can then be returned directly to HANA and visualized with front-end tools.

More than 90 different algorithms

Excellent performance thanks to SAP HANA

No additional license costs

Modeling in WebIDE or HANA Studio



Benefits of the SAP HANA PAL

There are many benefits thanks to the direct execution of algorithms on the SAP HANA database. On the one hand, there are fewer ETL processes since data does not have to be transferred to external processes. On the other hand, particularly calculation-intensive queries profit from the parallel in-memory processing and real-time stream analytics. Furthermore, the functions made available by the PAL are HANA-optimized, so that even resource-intensive algorithms can be computed in a very short time.

Another benefit is the direct execution on the SAP HANA database, for this eliminates the need for other external machine learning software. This reduces additional license fees, however it requires much more specialized knowledge since SAP HANA PAL is sooner designed for data scientists than business users.

What do you need to know?

To use the SAP HANA PAL, you should consider that your own, already-written algorithms cannot be integrated. These have to be replaced completely after set-up or it may not be possible to use them at all.

If you're seeking a high-performance solution, then SAP HANA PAL is for you, for the performance gain as compared to CPU processing is quite high. However, the benefit is smaller as compared to GPU processing, so that in some cases only the same performance or just a minimal improvement can be achieved.

Conclusion

SAP HANA PAL is the cost-efficiency gateway into the topics of machine learning and AI. Whether using SAP HANA PAL is the right solution for you depends on many factors. There are challenges to overcome in order to create a high-performance solution, but the effort is worthwhile!

What we can offer you

We are experts in the topics computer-assisted optimization, AI, and machine learning. We coach, implement ML projects, and can help you, from the first contact with new technologies to the implementation of algorithms into your existing environment.

We will be happy to answer all of your questions and advise you as to how you can reap the greatest benefit from your data!

5 supported predictive analytics algorithms

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