msg.BI-DataMining

The Expertise to Help You Look into the Future

Data Mining enables you to predict likely market and business developments – and is therefore becoming an increasingly competitive key factor. As your highly skilled partner, we will support your data mining projects with extensive know-how and a well thought out process model. This will help you to maximize your data's potential and make sound decisions.

What makes companies such as Amazon or Google so successful? One factor governing their success is the consistency of how they collect and analyze the data and profiles of existing or potential customers in order to generate knowledge for management decisions. When doing so, they don't limit themselves to just current data either; they use data mining technologies and know-how to obtain decision-relevant forecasts and information about future developments in the framework of predictive analytics. This information includes:

• Tomorrow's top customers
• Processes or customers that are more susceptible to fraud
• Customers that are closer to withdrawing from contracts
• Customers that are more likely to purchase a certain product
• Customers from which a high response rate to a marketing campaign is to be expected

Data mining and predictive analytics make it possible to identify indicators of success and their underlying patterns. They create the prerequisites for anticipating market developments and developing new strategies to gain customers, such as search engine marketing or personalized advertising. In addition, given the exponential growth in the amount of data available – one of the features of Big Data – it is becoming increasingly important for companies to identify, extract and utilize the information of real relevance.

Process Model for Data Mining Projects

When developing a data mining solution that is tailored to meet your exact needs, including data supply and corresponding evaluations, we will support you with our msg.BI-DataMining service and extensive expertise.

Since data mining is far more than simply using tools and technologies, we have developed a process model based on our project experience which ensures that the solution makes optimum use of the potential the data offers in the best way possible, giving you real added value.

Business process analysis → Data sifting and analysis → Data preparation → Modeling → Evaluation → Pilot application

Process Model for Data Mining Projects

value – inspired by people

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1. Business process/information requirements analysis

Objectives of information requirements analysis:

- Understanding of technical contexts
- Definition of task and goal
- Definition of criteria for success

2. Data sifting and analysis

Objectives of sifting and analysis of data:

- Task breakdown
- Specification of data to be considered
- Understanding of data
- Development of data frameworks and availabilities

3. Data preparation

This is particularly important because only technically correct processing of the data will ensure high-quality indicators and influencing variables are delivered. Our services:

- Statistical analysis
- Derivation and definition of indicators
- Integration of expert knowledge
- Review of data quality and plausibilities
- Definition of training and test quantities

4. Modeling

Data Mining models are created no later than after definition of the data and indicators. The methods we use for this include:

- Association and sequential analyses
- Decision trees
- Linear and non-linear regressions
- Neural networks
- Ruled-based neuro fuzzy systems

5. Evaluation

Evaluating the models reveals information about contexts and plausibility. Experience has shown that the user will only accept plausible models, and these add value. To guarantee that this is the case, we implement the following measures:

- Evaluation of model quality
- Check of plausibilities
- Identification of relevant influential factors
- Optional: Selection of deployment model for pilot use

6. Pilot application

The chosen model is integrated into the operative processes so that the results can be used directly. When doing this, we take the following into consideration:

- Monitoring and improvement of the model's application (reporting)
- Integrated data supply
- Optional: Training for users

Documentation

All results and conclusions, statistical evaluations and analysis findings are documented in each individual phase.

msg.BI-Service and Solution-Portfolio

msg.BI-DataMining is part of our msg.BI-Service and Solution-Portfolio. As your competent partner, we will give you on-site advice on different areas of business intelligence, including strategy consulting, analysis and design, and how to realize a BI architecture tailored to your requirements. To be in a position to meet your information needs in the best way possible, we devise suitable BI application concepts and help you through every step, including conception and design, implementation and operation of your BI environment.

Strategic BI-Services — BI-Strategy Consulting, BI-Architectural Consulting, BI-Organizational Consulting, BI-Coaching, BI-HealthCheck ...

Business BI-Solutions — Sales Management & Controlling, Fraud Detection, Lead-Time Controlling, Campaign Management ...

Customer

Technical BI-Services — BI-Requirements Analysis, BI-Design, BI-Operation, BI-Tool-Expertise, BI-DataMining ...