infoteam software

AI-based prediction of customer satisfaction

For our client:

SIEMENS Healthineers

Technical publication on the project:

Data Science | KI | Predictive Analytics

Balanced Random Forest | Qlik Sense®

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Initial situation

- **Goal:** early detection of changes in satisfaction of customers of high-end medical devices with optimized time resources
- **Goal:** objectify interculturally conditioned subjective expressions of satisfaction
- **Idea:** development of a supporting software for data-based prediction of customer satisfaction
- Combination of medical device operational data (10^4–10^6 events measured per day) and customer service data

Solution

- Analysis and processing of data in collaboration with experts from Siemens Healthineers
- Feature engineering (development of key figures based on existing data)
- Development of an AI model using a balanced random forest[1] to predict customer satisfaction
- Development of a business intelligence dashboard based on Qlik Sense® to display the predicted customer satisfaction and to interpret the predictions using SHAP values
- Project documentation: solution, code, functionality

[1] Balanced random forest allows model training with unbalanced data sets where there is very much data for one event and very little data for the other event.

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