Mantigma GmbH

Mantigma is a developer of mathematical software for the financial and energy industry. Mantigma is particularly strong in forecasting, multivariate statistics, and machine learning. From the beginning, its mission has been to help established financial institutions realising the bank of the future.

Mantigma's flagship product predictR allows retail banks to offer their clients transaction-based forecasts of current accounts, scenario planning and saving plan generation. In May 2016, a large-scale collaboration with Vienna-based Erste Group Bank AG with 16 million clients was announced.

The company was legally established in January 2016 by a team of four founders with borisgloger consulting GmbH, a leading agile management consultancy in the German-speaking area, as a strategic partner. Roots go back to the founders team winning a financial services hackathon of a major CEE bank in 2014.

Award-winning Team
Mantigma is proud of its numerous industry recognitions and awards acknowledging both our deep market understanding as well as fast and reliable product execution.

- 1st Prize, Bankathon, Hamburg, 2016
- 1st Prize, innovation2company, Vienna, 2016
- 3rd Prize, CA Technology Challenge, Vienna, 2016
- 1st Prize, Catalysts Coding Contest, Vienna, 2015
- Top 3, Vienna Startup Award, Vienna, 2015
- 1st Prize, Erste Group FinTech Hackathon, Vienna, 2014

Contact
Jakob Etzel, Managing Director
jakob.etzel@mantigma.com | +43 664 3707939

Margaretenstraße 77/5, 1050 Wien, Austria
FN 447445 h, Company register Vienna

predictR:
Current account balance forecast for retail banking

PredictR is a unique software solution for online banking that provides future estimates of private customer cash flows based on an algorithmic analysis of historical transaction data. Empower through literacy! We give users a comprehensive understanding of their financial situation.

This award-winning hackathon result contributes to a novel and innovative generation of online banking. It is a fresh and innovative tool offering a special decision-making mark in the highly competitive retail banking market.

The uniqueness of the solution arises from the sophisticated underlying algorithms - combining higher mathematics with advanced pattern recognition - and a clever and simple user interface centering around a single graph running towards the future.

With the implementation of predictR banks can offer their customers:

- ❏ Intuitive insight into their personal financial situation
- ❏ Simulation of relevant life events such as job loss or relocation
- ❏ Support with product search / decision, such as leasing contracts or savings plan

Reference project
ERSTE Group is among the largest financial services providers in Central and Eastern Europe. Its retail online banking application “George” is pioneering in the Germans peaking area and beyond. To further increase “George’s” attractivity, Mantigma has developed a plugin based on the predictR technology that will be made available to more than 10 million customers.

Forecasting systems for the energy industry

The relevance of electricity grids as a basis of our society is further increasing. Climate protection has become a driving force of change in the energy economy. Die growing feeding-in of weather-dependent renewable energy sources (wind, solar) impact volatility on the supply side. Withdrawals from nuclear power and carbon emission trading systems affect traditional energy mixes. Grid integrations and new legal constraints require adapted trading strategies.

Mantigma focuses on the necessary mathematical models to find competitive answers on these challenges. We offer players in the energy industry amongst others:

- ❏ Forecasting of electricity demand and supply, grid load, demand side response (DSR) events on all time horizons (intraday, day-ahead, monthly, quarterly, yearly); combination of (mixed frequency) internal and external data sources and multiple models (ensemble methods)
- ❏ Classification of time series and customers, e.g. for accelerated forecasting, optimisation of portfolios and tariff structures, generation of sales signales, planning of DSR activites
- ❏ Optimisation of trading strategies for control energy and spot markets; validation of existing price and supply models

Reference project

For a leading German utility, Mantigma has optimised the day-ahead electricity demand forecast on the corporate client portfolio. The focus was on choosing between an aggregated or bottom-up forecast to optimise forecast quality. Mantigma has developed in parallel multiple model families (holiday-respecting copying, ETS, ARX, GDFM, ANN, etc.) and combined them intelligently. Based on artificial neural networks, the existing forecast method was beaten. Decisive for the cooperation with Mantigma was the transparent cooperation, joint research workshops and delivery of sources in contrast to black box approaches. The client will be able to run and further develop the models independently.

Credit scoring based on machine learning

Seeking new profit opportunities in times of long-lasting low-interest phases financial institutions are increasingly considering consumer loans. Traditional loan decision algorithms are often not applicable as banks might not have prior experience with the product or credit bureau bureau data is lagging behind too much timewise. To circumvent these restrictions, scoring can be based on current account transaction data of own or - thanks to the new payment service directive ("PSD2") - new customers.

Mantigma supports financial institutions with the development of credit scores, e.g. integration of PSD2 data, and other relevant topics:

- ❏ Application / behaviour score for various loan products
- ❏ Scenario development based on internal and external data, e.g. testing of product ideas
- ❏ Forecasting for working capital loans, factoring, etc.
- ❏ Customer churn
- ❏ Sales management

Reference project
For a young fintech company Mantigma has developed a credit risk model for consumer loans. The challenge was to extract reliable model parameters from relatively small samples. Multiple information sources (e.g. master data, credit bureau data, XS2A) were the combined source for an application score. Mantigma also built several scenarios delivering business-critical scenarios and supporting the further product development.