

Industrial Research

The applicability of our research is an important goal for us. We apply, evaluate and deepen the results of our scientific research in industrial projects. Our projects with enterprises are a major source of new research challenges.

Artificial-Intelligence based Service Configuration

Ever more rapidly changing competitive conditions and ever shorter technology lifecycles require today's companies to align their IT services with goals such as flexibility, resilience or energy efficiency. As a result, the alignment of IT services with these key goals is becoming increasingly important for more and more companies.

The goal of the project is the development of an AI-based software system for the automated configuration and parameterization of IT services according to predefined target functions such as flexibility, resilience or energy efficiency. The research project thus makes an essential contribution to answering the research question: How can IT services be dynamically reconfigured and optimized with regard to variable IT goals?

Fast and reliable estimation of initial offers in shopfitting.

The calculation of initial offers in shopfitting is at the same time important for motivating the customer and creates a huge effort for calculation due to the many different parts used.

The goal of the project is the evaluation of the possibilities of forecasting a price framework for customer offers. Based on machine learning methods, an algorithm is developed that allows the prediction of the price frame for customer offers.

Digital Insurance

The project is identified possible development paths for the insurance industry over the next 10 years. The project investigated the impact of information and communication technologies on the insurance industry. Technologies were identified that have, or could have, impacts now or in the future. The effects can lie both in the influencing of the execution or organization of business processes and in the creation of completely new business processes and business models.

Development of a generic system for automated decision making for increasing the resilience and efficiency of virtualized IT systems.

Resilience is the ability of an IT system to provide, maintain and improve a number of services even when changes occur. To increase resilience, redundant components and assemblies are inserted into physical IT systems. This increases on the one hand side the reliability of the system, lowers however on the other side the efficiency. Therefore, redundancy represents a very cost-intensive and inefficient procedure for the increase of resilience, is however in physical computer systems often the only choice.

IT-Trigger

The research project developed an integrated software system for the identification and counteraction of disturbances in cloud environments based on defined rules, forecasts and workflows. In contrast to the available IMONs, the system can generate prognosis models regarding future structural changes in the IT infrastructure. Thereby potential Single-Point-Of-Failures, non-existent redundancies as well as further disturbance events due to structural changes in the IT infrastructure can be identified. In addition to the required structural data, relevant performance data can also be used to create such forecast models. In order to guarantee access to the required structural data, a CMDB is to be integrated into the system to be developed.

Deep-learning based identification of customer leads

The project laid the foundation for the definition of fine-granular rules for identifying customer leads in automobile trade.