1 Abstract Talk „Machine Learning for Efficient Root-Cause Analyses and Rapid Optimization of Process Steps"

The increased amount and availability of process, machine, and quality control data due to advances in the IT-infrastructure have opened up massive opportunities through analysis of this data with advanced methods such as machine learning. In this talk, we will present three of our success stories, where VTU has created value for its customers by application of these analytic techniques.

In the first example, machine learning helped identifying a defective piece of equipment that had caused major issues in commercial production of a therapeutic protein. In the second case, machine learning was used to cluster adverse events encountered during operation of an exhaust air purification system. This revealed unexpected scenarios and allowed for effective corrective actions. Finally, machine learning was used to build a process model for the formulation step of an active ingredient. This enabled precise adjustment of the process parameters to improve productivity.