Project B3
Data Mining on Sensor Data of Automated Processes
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Current situation
- Large quality control loops due to end-of-line quality inspection
- High resource consumption
- Offline analysis
- Control interventions only possible with timely delay
Need for continuous monitoring and process control interventions

Goal: Continuous quality control and process adaptation

Distributed data analysis
- Distributed learning
- Learning from Label Proportions (LLP)
- Training of Local Models from Counts (TLMC)

Sensor data processing for quality prediction
- Aggregation and feature extraction from time series
- Prediction of failure types
- Steel block quality prediction

Production process control strategies
- Process parameter adaption
- Adaptive process control
- Customer requirement-oriented process control

Methodology and Results