

Development of a model for error recognition for an industrial fermentation process

Internship (15/10 ECTS) Start in December 2024

The worst-case scenario in industrial bioprocesses is a failed batch, as it can be extremely costly. A real-time model for recognizing errors can reduce batch failures, thereby enhancing the overall consistency of bioprocesses.

The objective of this internship is to create a data-driven model for identifying errors using existing fermentation data. This model will detect specific errors in real-time, allowing users to receive timely feedback and respond to issues to preserve the overall bioprocess.

Responsibilities:

- Get familiar with the existing fermentation data
- Development of a data-driven model in Python
 - Data Preprocessing
 - Model Optimization
 - Model Validation

Requirements:

- Passion for programming
- Previous experience in Python
- Ability to work independently.
- Modelling experience preferred but not required.
- TUM student

We offer

- Insight into an industrial bioprocess
- Your own workstation with a desktop computer

Application

If you are interested, please contact Dennis Beerhalter (dennis.beerhalter@tum.de).

I will be happy to answer any further questions you may have.

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