



Personal Introduction to **Motius**

Manuel Pasieka , 25 Mai 2022



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Defect Prevention/Cost reduction (2020)

Second Phase PoC, 8-12 weeks

Anomaly detection of time series data, recorded from 3 accelerometers in order to identify defects during production before QA.

1. Data Ingest

Raw data resampling and filtering in Spark, export to parquet.

2. Data Processing and Feature engineering

Partitioning of time series into production steps, fusing meta data, alignment of sensor streams, Transformation to frequency domain

3. Anomaly Detection

Building of different anomaly detection models for the time and frequency domain.
Model selection based on F1 score.

Outcome

High false positive rate: working with high precision >95% on individual steps but false positive rate for the complete manufacturing process was too high for desired use case.

Learnings

Improve customer expectation management, closer collaboration with domain experts, extend sensing modalities



Thanks!

Does anyone have any questions?

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