Algorithmus Schmiede

We develop computer programs that solve complex tasks.

Data Science

Numerics

Physics

Project Reference: Industrial Automation

Algorithmus Schmiede

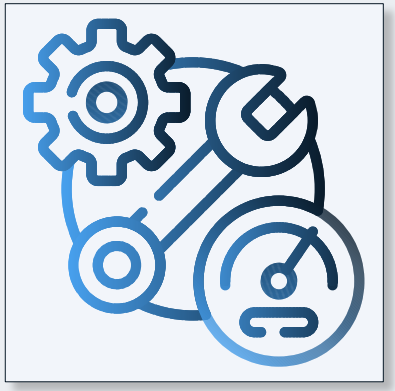
We develop computer programs that solve complex mathematical / technical tasks.

Our employees have a doctorate in natural sciences.
We program in **Python** and **C++**.

You benefit from:

- Algorithms with maximum reliability
- A deep understanding of physical relationships
- Scientific way of working

Industrial Automation



Development of control algorithms for the automated adjustment of machines.

Contents:

- Proof of concept to demonstrate the feasibility of the project
- Experiments in production facilities ➲ Analysis of production logs
- Development of algorithms in the field of control engineering and computer vision.

Challenges:

- Stochastic noise throughout the production process
- Very high costs for experiments
- Very high prediction accuracy required

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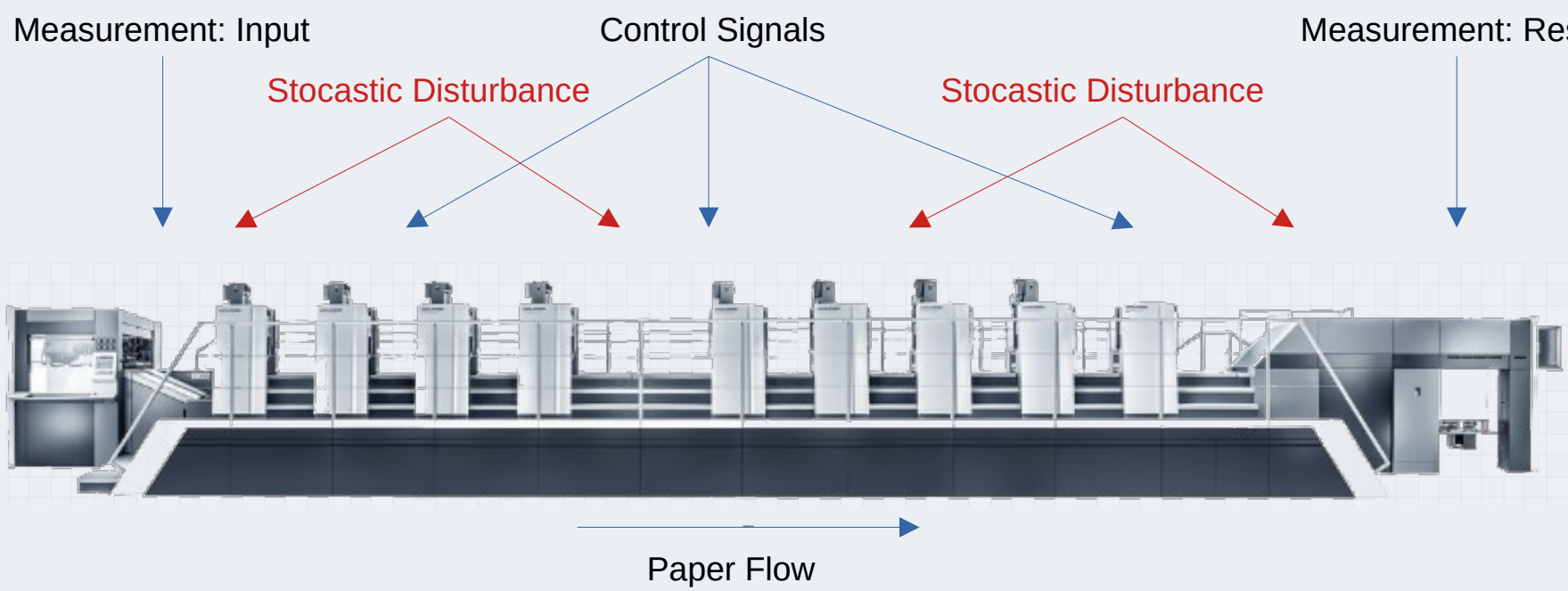
Industrial Automation

The production process was characterized by a large number of stochastic disturbance variables. Targeted experiments and comparison with production logs provided the necessary information for the development of a reliable solution.



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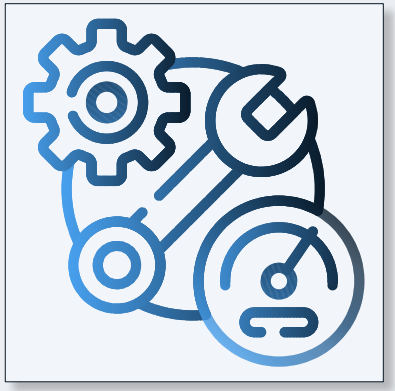
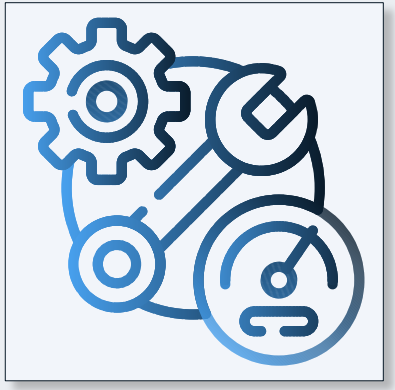


High costs for carrying out experiments on the system due to production downtime.

➲ Development of interruption-free experiments:

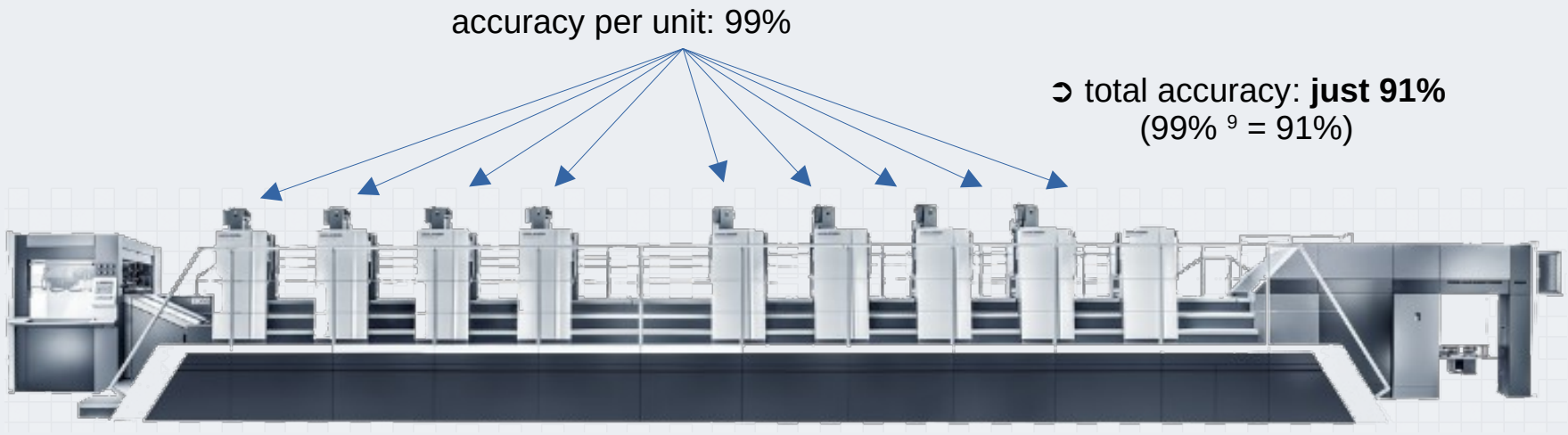
- Replacing experiments by statistical analysis of production logs
- Approx. 100x more data is needed, but this data is free

Industrial Automation



The serial design of a printing press leads to very high accuracy requirements. A print result is only accepted, if each individual printing unit delivers a good result.

Example:



Conclusion: Aim for precision of 99.9% per unit ➲ Total accuracy: 99%

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I am happy to advise you on your project idea.

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