



Algorithmus Schmiede

We develop computer programs that solve complex tasks.



Data Science



Numerics



Physics

**Project Reference:
Metadata from Sensor Signals**

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



Metadata from Sensor Signals



Construction of meta-information from sensor data

Contents:

- Identification of strategically important information
- Application of suitable methods from the fields of physics, statistics & data science to identify correlations
- Design of experiments and benchmarks to verify the process and determine process limits

Challenges:

- Idea for potential correlations:
Physical background knowledge helps immensely here
- Developing an understanding of correlations
 ↳ Limits of the process

Color from Distance Measurement



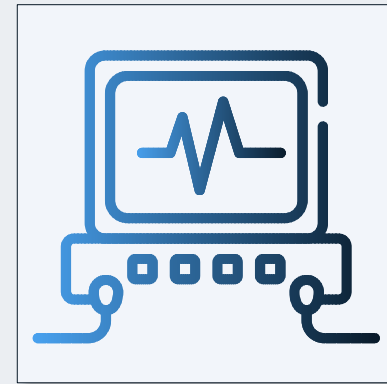
Example:

Extraction of object color from a 2D distance measurement.

Explanation:

- Object color is an optical property
- Distance measurement is an optical process
- Distance measurement not 100% accurate - contains measurement artifacts due to environmental influences
- Object color leads to specific signatures in the measurement artifacts
- Determination of the object color by analyzing the measurement artifacts

Color from Distance Measurement



Example:

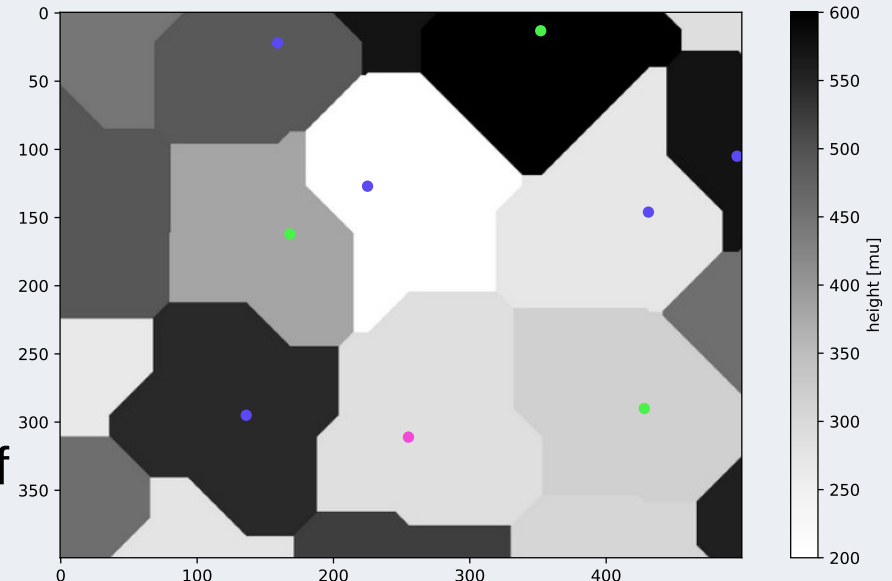
Extraction of object color from a 2D distance measurement.

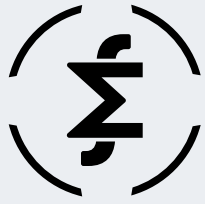
Explanation:

- Color extraction only possible at specific points
- Accuracy > 80%
 - ↳ Exceeds customer requirement

General conditions:

- Proof of concept in less than 2 weeks
- Preexisting experience with this type of measurement data





Algorithmus Schmiede

Data Science | Numerik | Physik



Stay tuned:



- Follow [@Algorithmus Schmiede](#) on LinkedIn
- Subscribe to our [Newsletter](#)

I am happy to advise you on your project idea.



Dr. Markus Dutschke

CEO, Algorithm Developer

 +49 178 148 3264

 impact@algorithmus-schmiede.de

 www.algorithmus-schmiede.de