paiqo

The Platform and AI Company

About paiqo

2019

Founded by industry experts

15 Experts

Data Scientists, Data Engineers and Business Developer with years of experience in successful delivery of data science projects for many well-known companies.

Background

computer scientists, mathematicians, statisticians, engineers, economists

Research & Teaching

Close cooperation with universities and research institutes in business projects, talks, research activities and teaching.

>10 Customers

In the field of (online-)retail, healthcare and fitness, manufacturing

Know-How

methodological and technical (e.g. Spark, Hadoop, In-Memory, Machine Learning)

Microsoft Partner
Gold Data Analytics
Gold Data Platform
Silver Cloud Platform
Microsoft

databricks

The Platform and AI Company

- Years of project-experience in building Platform and AI solutions

- End-to-End enabler for data & AI projects

- Business Understanding & Technical Excellence

- *Focused on your data success*

Platform

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AI

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Our Approach

AI

Envision → Connect & Explore → Find Value → Integrate

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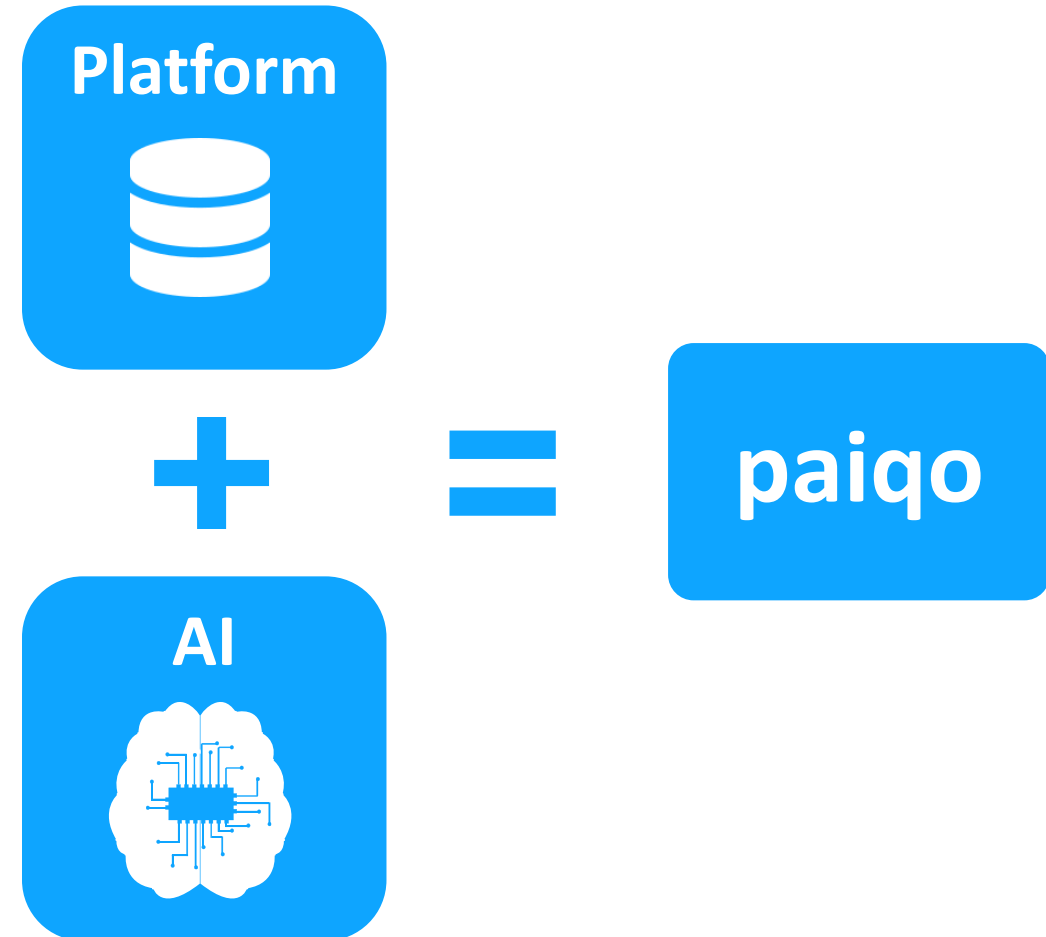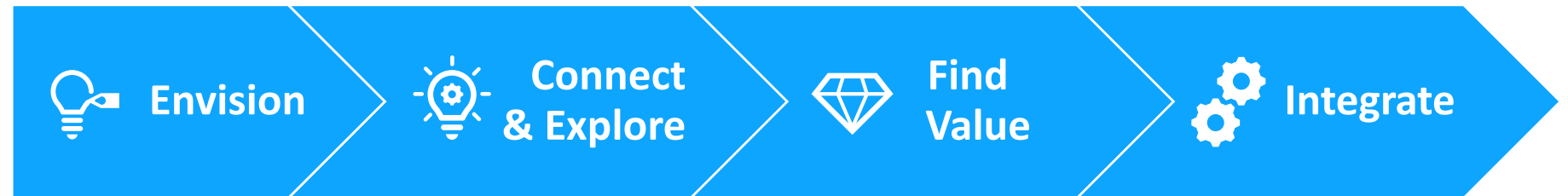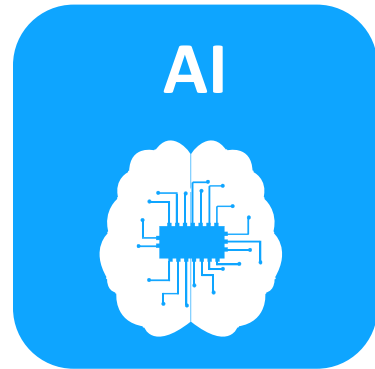
AI and Machine Learning alone will not lead to a digitized Process or Company. It also needs a Platform where Data, AI and Processes can be operationalized
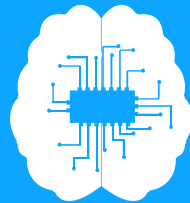
Platform

Establish Data & AI Platform
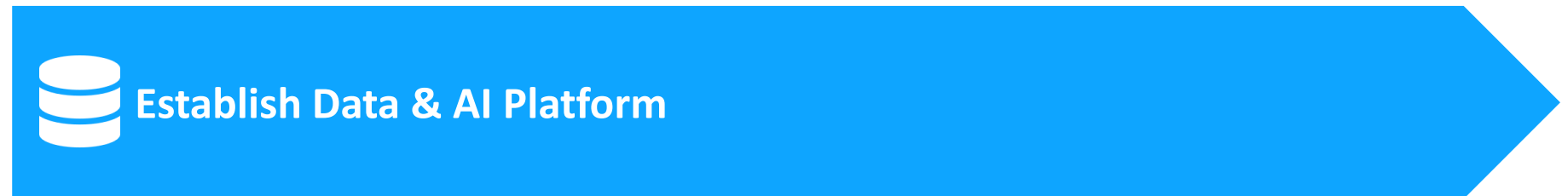
Our Offering

Data Platform

Platform Architecture
Building Data Hubs
Analytics DevOps
Security & GDPR

AI Solutions

Data Science / ML
Predictive Models
Deep Learning
End-to-End Solutions

Trainings
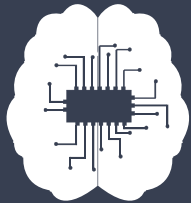
AI Intro
Methodology
AI Journey
AI Team-Setup

Business Development

Find Business Value
Design Thinking
Digitalization Strategy
Augment Business & AI

Our Offering – Focus Business Areas

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AI Solutions

Customer Analytics

- Customer Segmentation
- Predictive Customer Lifetime-Value
- Campaign Optimization & Next Best Offer
- Recommendation-Systems
- Customer Journey Optimization
- Customer Churn

Machine Analytics

- Manufacturing Analytics
- IoT Analytics
- Predictive Maintenance
- Predictive Quality
- Parameter Recommendation
- Visual Inspection

Data Platform

Image Classification

Meat Classification – Neural Network based Visual Inspection
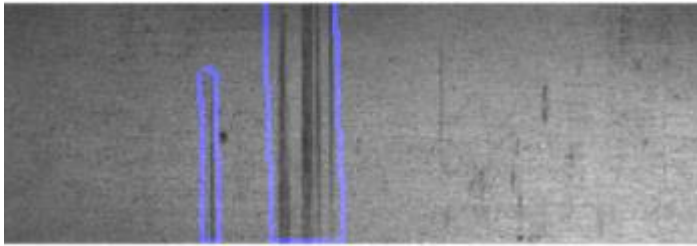

Initial Situation

- Manual (partial) inspection of meat quality

- Poor quality meat was sold and caused a recall

- No "recycling" of acceptable meat when producing premium products

Solution

- Prediction of quality label of meat based on few samples

- Live image (pre)processing

- Automation of production process

- Reduction of manual effort and process risks

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Steel Production – Neural Network based Visual Inspection

Ground truth:

Flaws

Segmentation result:


Predicted flaw areas

Initial Situation

- Flat sheet steel production consists of many processing steps that touch the steel

- Each step can potentially cause flaws on the steel surface

- Image data of the steel surface is gathered via cameras

Solution

- Development of a Deep Learning model based on the UNet Neural Network architecture

- The model segments the images into flaw and non-flaw components

- Human in the loop Decision Support and Automation

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Retailer Shops – Shelf Classification
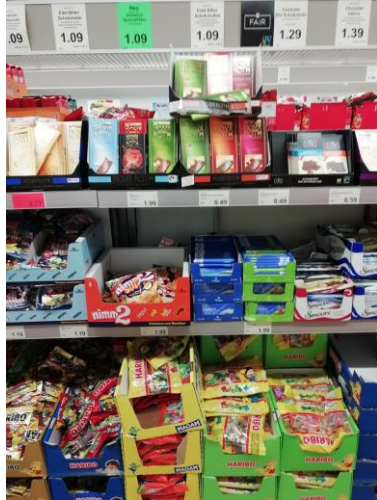
Initial Situation

- Manual inspection of empty shelves
- Reordering performed manually

Solution

- Image classification & segmentation of shelf-actions: (urgent) restock / full
- OCR-recognition of articles
- Dashboard of real-time shelf-status for all stores
- Automation of reorders
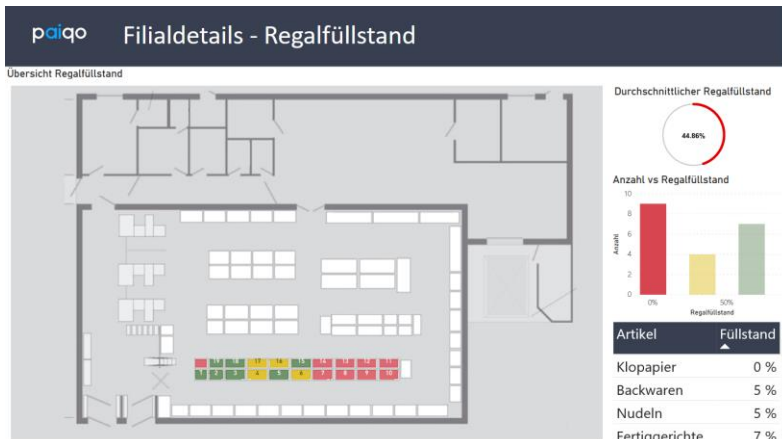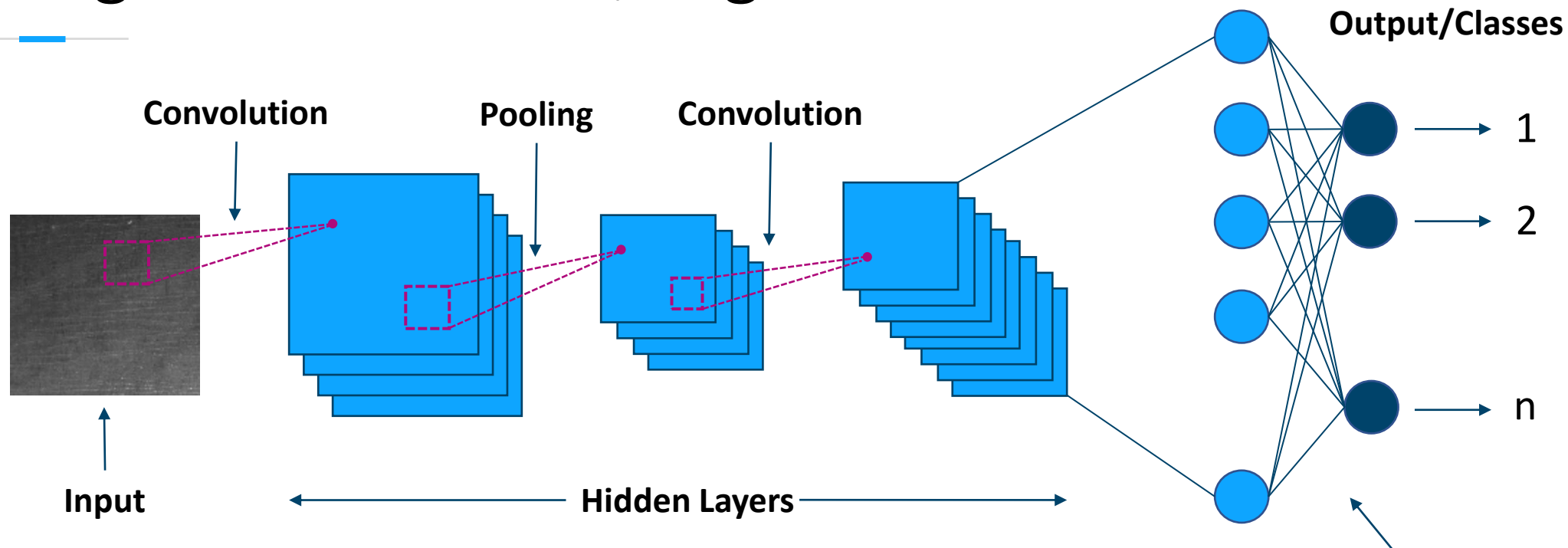- Correlation analysis shelf-status-trend vs revenue

Image Classification/Segmentation

State-of-the-art systems are using **Deep Learning** to classify and segment images. The layer-based approach of Deep Learning allows **automatic feature extraction** (e.g. edge detection).

However, training a system from scratch requires a large amount of data. Therefore, **Transfer Learning** is often applied in practice. Transfer Learning uses pre-trained hidden layers and only adapts the network head to the specific task at hand.

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