CLOUD-BASED PLATFORM

FOR PATTERN RECOGNITION

Use Case 1: Spare part number determination based on a photo of a defective component

? Challenge

- The digitization of millions of spare parts generates several terabytes of unstructured data in the form of images and meta-data.
- This flood of data must be made searchable and pre-processed for image recognition algorithms.
- Data must be securely separated by client.

Solution

- Scalable data management platform based on MS Azure.
- Intelligent upload management for uninterrupted, simultaneous upload of data from multiple plants across all clients.
- Creation of a search index across the data set of each client.
- Security mechanisms for secure data transfer, storage and client separation.
- Web-based cross-platform app for managing and searching data
- Mobile app for real-world collection of training data.

Added Value

- Enables scalable storage and processing of data
- Search is continuously improved by taking user behavior and newly added meta data into account
- End-to-end data security and protection
- Intuitive web app, similar to Google Image Search

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Use Case 2: Ingredient recognition of food packaging for an online store function

Challenge

- Product packaging, label design and content in the retail sector are highly diverse
- Ingredients should be automatically and reliably detected and extracted on product packaging

Solution

- Classification of products according to packaging shape
- Automatic image processing to smooth labels
- Text correction using word lists
- Extract relevant text passages using NLP
- Scalable data processing pipeline

Added Value

- Reliable and fast text recognition independent of packaging geometry
- High throughput rate for large volumes of images
- Extracted texts are searchable