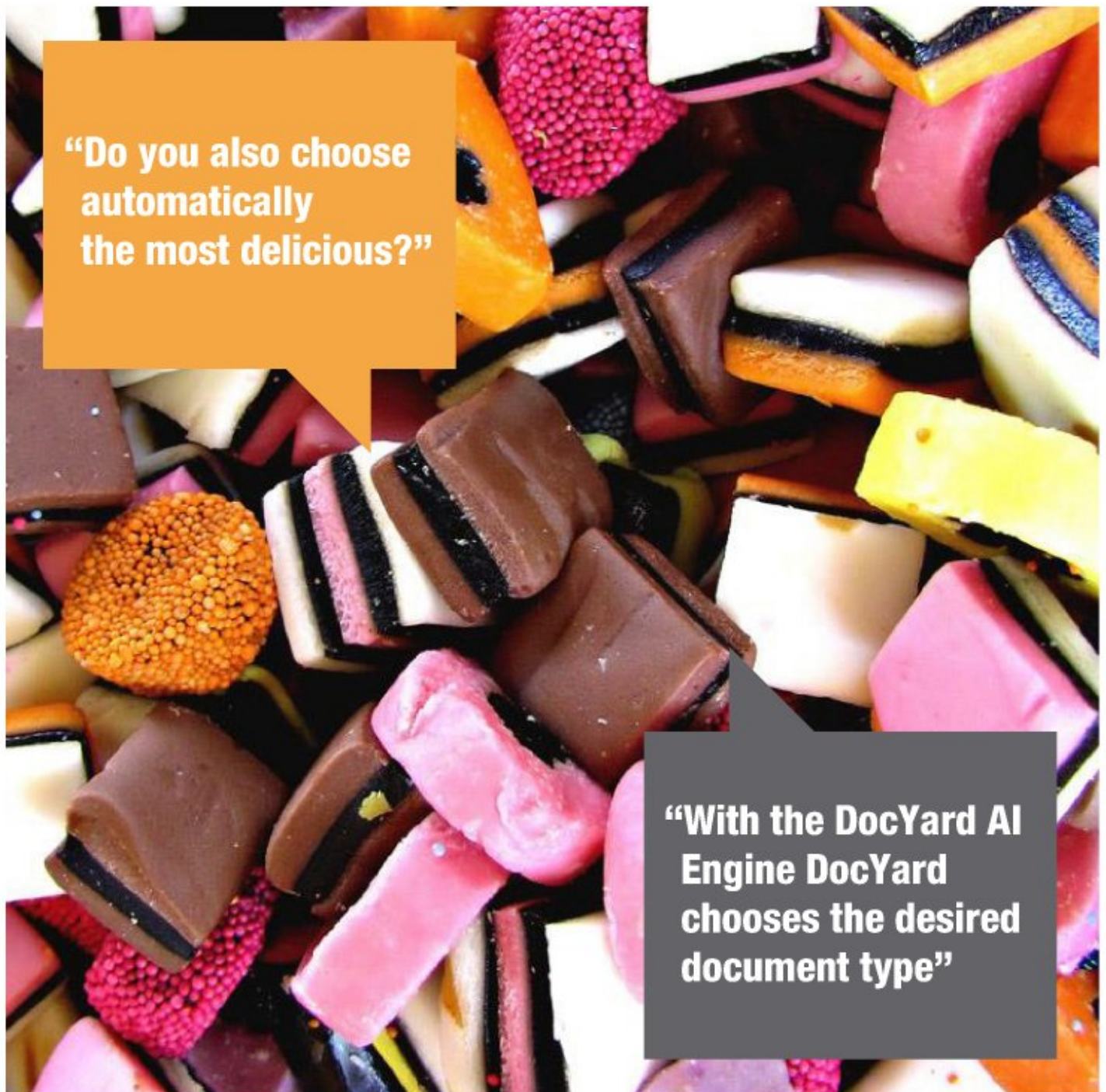




DocYard AI Engine Classify

Productsheet



“Do you also choose automatically the most delicious?”

“With the DocYard AI Engine DocYard chooses the desired document type”

Automate business processes

Customer correspondence, receipts, questionnaires, inquiries ...
 Sorting, assigning, and processing daily correspondence is a time-consuming task. It becomes a simple operation with DocYard's new Artificial Intelligence-based classification module.

Method for content classification

Machine learning is considered as part of artificial intelligence (AI). Unlike a static, rules-based algorithm in which a developer writes code that describes the steps a computer must take to achieve the desired result, a machine learning algorithm can flexibly use and follow examples of the intended outcome to adjust.

For example, the new module can capture data and use a supervised machine learning algorithm to train a model. This model can then be used to make predictions about unseen data.

A typical workflow includes the following phase to develop and maintain a production-ready model:

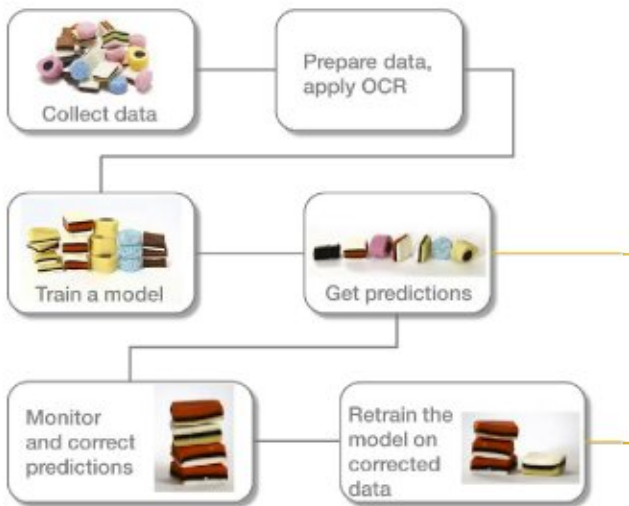


Illustration 1: Typical Workflow

One of the biggest challenges in creating a machine learning model is knowing when the model development phase is complete. To measure the success of the model, you can use the evaluation function of the new module, which gives you useful statistics.

Total amount of samples: 3629				
Amount of samples in train: 2903				
Amount of samples in test: 726				
Classification Report:				
	precision	recall	f1-score	support
AutoMobil	0.95	0.90	0.92	20
Familie	0.76	0.93	0.84	14
Flucht	0.99	1.00	1.00	115
Gesundheit	0.88	0.91	0.89	46
Kultur.Buehne	0.78	0.82	0.80	17
Kultur.Film	0.91	0.72	0.81	29
Kultur.Kunstkultur	0.67	0.83	0.74	12
Kultur.Literatur	0.69	0.82	0.75	22
Kultur.Musikkultur	0.89	0.81	0.85	21
Lifestyle	0.93	0.89	0.91	47
Reisen	0.80	0.83	0.82	24
Sport.Fussball	0.98	1.00	0.99	88
Sport.MehrSport	0.94	0.91	0.92	33
Sport.Tennis	1.00	1.00	1.00	18
Sport.Wintersport	0.98	0.93	0.95	44
Umwelt	1.00	0.73	0.85	15
Wirtschaft	0.95	0.96	0.95	96
Wissenschaft.Natur	0.75	0.86	0.80	21
Wissenschaft.Raum	1.00	0.94	0.97	17
Wissenschaft.Welt	0.67	0.89	0.76	9
Wissenschaft.Zeit	0.85	0.61	0.71	18
avg / total	0.92	0.91	0.91	726

Illustration 2: Evaluation function

New DocYard Service (AI Engine) and modules

For the DocYard document processing platform, a new AI Engine service has been developed to handle all of AI DocYard's AI tasks, such as the classification of text documents. The text classification module interacts with the AI Engine service and requires that a module manager be executed on the processing machine.

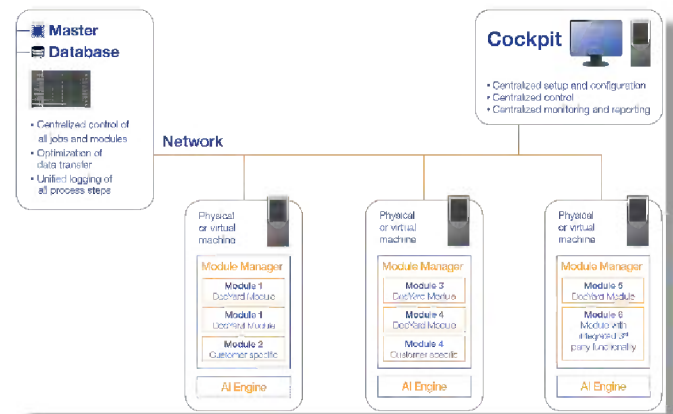


Illustration 3: DocYard Architecture

DocYard Workflow

DocYard includes two sample text classification workflows that, when combined, form a text classification demonstration project.

The first workflow creates a trained model.



Illustration 4: DocYard-Workflow

This model is used by the second workflow to classify documents.

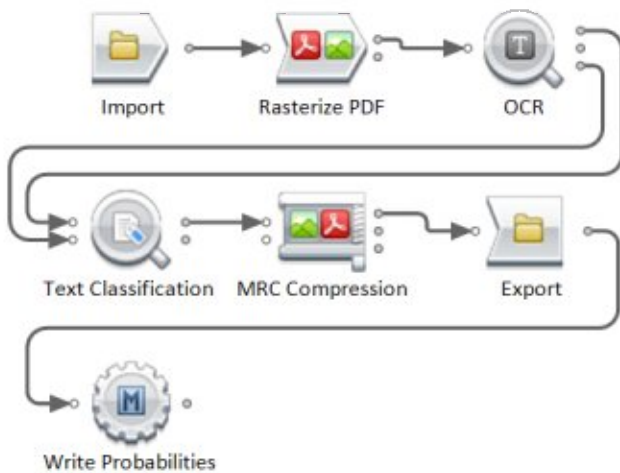


Illustration 5: DocYard-Workflow

Improvements

To improve the results of the classification, it is possible to include a feedback loop in the workflow. The employee-corrected classification is then added to the training set so that after the next training the next equivalent production document is better classified.

It is also possible to use a combination of rule-based recognition with the Form Recognition module and new machine learning-based detection. For example, to classify ID cards with little text using a clear program line directly as an ID card.

The DocYard AI engine is currently optimized for English, German and Dutch.

"Machine learning makes your organization and your workflow smarter"

New functions

- Automatic classification of structured and unstructured information. (Documents, email, etc.)
- Self-learning
- High recognition quality Smart Ocr enhancement

Your advantages

- Fast project start
- Cost reduction through faster processing time
- Combination with other DocYard flexible features

About DocYard GmbH

DocYard GmbH delivers production software solutions offering total document management and document and data conversion solutions, along with customized services and outstanding support. DocYard solutions are easy to handle and require a manageable level of customization and individual programming. This to implement and integrate every step of production into configurable, centrally manageable workflows to achieve the highest level of automation and integration in document processing. Using the deeply integrated MRC (Mixed Raster Content) Compression Technology of Foxit and other tools for Classification and Data Extraction DocYard covers all requirements for Mail Room Solutions and Scan Services.

We create proven software

We create professional software like our proven DocYard suite. By delivering great software our clients can work faster by automating common, repetitive tasks. Our products make it easy for you to take care of quality during all stages of production.

We help you to optimize your process

We don't just ship software but we help you make great use of it. We support and assist our customers until the software is running productively and a return on investment has been achieved. We don't consider a project successful until our customer feels the same way.



Work with humans, not robots

At the heart of every successful project is an agile team (of humans) fully equipped to deliver results from start to finish. Our interdisciplinary teams are scalable for projects of all shapes and sizes, allowing for efficient collaboration with the client and each other while never losing sight of what really works for your business and your customers.

We believe in measurable results

We strive to start producing a return on investment from the very first project, while significantly increasing productivity and ensuring lasting competitiveness. We know from our own experience that investments with a given budget have to lead to bespoke solutions – and with our solutions, you can still achieve that goal while keeping customizing and individual programming work to a minimum. And the best thing? It's all measurable!

We're flexible and always ready to act

Your business can change, which means the way you use our products can change too. Our products and people are flexible enough to meet your needs and your scope of work. This way, we're always ready to act.

For more information visit our website: www.docyard.eu or contact us.



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