TAKING INPUT MANAGEMENT TO A NEW LEVEL WITH THE COGNITIVE CLASSIFIER

Image: Debeka

Together, Debeka and Insiders Technologies are opening new fields of application for innovative AI technologies. With the Cognitive Classifier from Insiders, Debeka achieves completely new performance dimensions in the automatic recognition of image documents. The intelligent combination of different deep learning classifiers for text and image information proves to be a forward-looking idea.

CUSTOMER
Debeka Group

COUNTRY
Germany

HIGHLIGHT
Combines Image and Text Recognition with Deep-Learning Creates a New Level of Automation

PRODUCT
smart FIX

HIGH VOLUME AND COMPLEX INCOMING DOCUMENTS

With its diverse range of insurance and financial services, the Debeka Group is among the top five in the German insurance and home loan and savings industry.

Low costs combined with the highest level of benefits and optimum service form the basis for a price-performance ratio for all Debeka products that independent business magazines and consumer journals repeatedly recognize.

Every year, Debeka receives around 16 million document pages via a wide variety of input channels: classically by postal mail or fax, by e-mail, as an upload via the customer portal, or via sales.

In addition to the sheer volume of documents, the complexity of incoming document types is a challenge due to the many different insurance lines.

CHALLENGES

- ✓ High complexity and heterogeneity of input documents across divisions
- ✓ Separation into divisions based on ambiguous recognition features
- ✓ A great deal of image material specific to the division that previously had to be sifted through manually
- ✓ High volumes require maximum automation and reliability

"Together with Insiders Technologies, you can break new ground in AI and be sure of quality in the end. The future of digitization will lie in complementing rule-based systems with AI-based systems - as smart FIX already offers today."

PATRICK SCHNEIDER

HEAD OF FRONTEND DEPARTMENT, DEBEKA KRANKENVERSICHERUNGSVEREIN A. G.

SMART FIX FOR DIVISIONAL SEPARATION AND ROUTING PROVEN

Debeka has been successfully using the smart FIX solution from Insiders Technologies on-premises for several years.

Essentially, two use cases were implemented here. First, the identification of the division - where does the letter or document have to go? Second, the analysis of the document structure and content - what exactly is the document about is determined in order to be able to decide what needs to be done with it and who is responsible for it. This is also where the automated recognition of the insurance number or claim in question is taken care of.

Based on the identified document class, routing to the appropriate service department takes place, and the corresponding workflows are started. Depending on the line of business and the process, smart FIX can automatically create a claim in the specialist application.

The reporting functions of smart FIX are also used frequently and with pleasure by Debeka for the simple creation of analyses at the push of a button. Key figures such as the total number of incoming documents and the number of processes or documents, each broken down by input channel and division, are interesting for further optimization.

NEW DIVISIONS BRING A LOT OF VISUALS

Gradually, more and more lines of business at Debeka were connected to the input management system with smart FIX and digitized. The incoming mail of the car insurance and building society divisions is characterized by many incoming documents with images and photos such as accident pictures, real estate plans, or ID documents.

These documents offer little potential for purely text-based classification and therefore had to be indexed almost entirely manually.

This gave rise to the idea of extending the text classifier to include image classification. In a first step, the solution should correctly recognize certain document classes such as ID cards, deeds, accident pictures, or real estate images.

THE BEST OF TWO WORLDS

Thanks to an agile and rapid project approach, the Cognitive Classifier was trained and implemented within a few months, intelligently combining the two classification methods of text and image recognition.

The most complex part was the training of the intelligent recognition software. Debeka provided real incoming documents with images and Insiders Technologies trained the interaction of text and image classification with supervised machine learning.

KEY FACTS

- ✓ Project by Debeka and Insiders Technologies
- ✓ Cognitive Classifier enables reliable recognition of mixed documents
- ✓ Image and text recognition work together intelligently
- ✓ Use of deep learning in modern machine learning approaches

BENEFITS

- ✓ AI and Insiders Technologies enable new solutions to complex challenges
- ✓ Innovations for daily practice
- ✓ Reduction of the manual rework rate from almost 100% to 9%
- ✓ Significant increase in the degree of automation

The Cognitive Classifier thus combines the best of both worlds: the proven excellent text recognition and now the classification of images with Deep Learning.

The previous workflows remained unchanged and the front end for users also remained the same. The AI continues to work reliably in the background and decides for itself whether text recognition, image recognition, or both are to be used.

The automation effect of the combined classifier is enormous. Debeka was able to achieve the most significant benefit in the building society sector, as this is where most of the images are received. A process in this division can comprise several hundred pages - a colorful mix of floor plans, site plans, register excerpts, and pictures of the construction progress.

While the majority of documents containing images had to be indexed manually before the introduction of the new process, this is now less than 10 percent.

Once the solution has been generally pre-trained, it continues to learn in the future without any great effort or technical requirements. The simple configuration options in almost every step enable the developers at Debeka to carry out around 90 percent of the required customization themselves.

FURTHER AUTOMATION FIRMLY IN SIGHT

The insurance group's next primary goal is to connect the remaining lines of business to AI-based input management. With the upcoming connection of the life insurance line, the volume of documents to be processed will increase by another 30 percent.

At the same time, the automation options that have already been implemented in some lines of business - such as an automatic claims system - are to be applied in all lines of business. The new quality of recognition through the joint processing of text and image also opens up new possibilities for further automation of processing.

With the Cognitive Classifier, a universal solution for the classification of documents and photos is now available that puts all existing approaches in the shade. This allows proven processes to be used even more effectively and the level of automation to be further increased.

The insurer's and Insiders Technologies' project for the Cognitive Classifier is already attracting a great deal of interest in the industry.

Image: Debeka
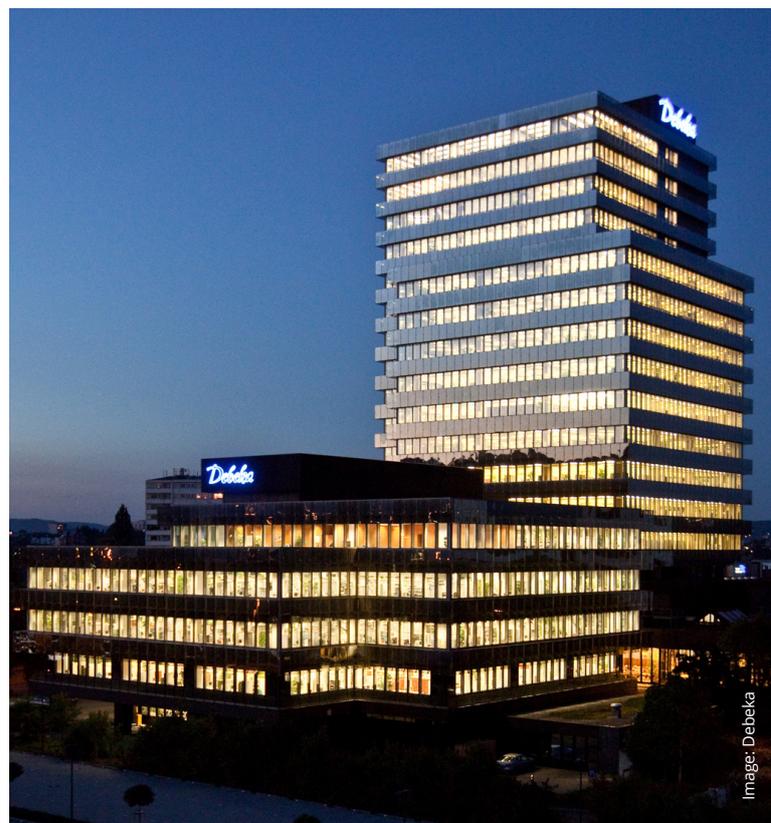
SMART FIX – TURNING DATA INTO ACTION

smart FIX is Insiders Technologies' standard product for automated processing of all incoming correspondence – irrespective of input channel, format, and structure. The moment they arrive, documents are gathered in one system, classified based on textual and visual characteristics, and rerouted to the according business workflow. Extract and validate all process-relevant information and streamline your processes, from data entry to completed transactions.

insiders-technologies.com/en/mailroom-automation/#smart-FIX

ABOUT DEBEKA

With its diverse range of insurance and financial services, the Debeka Group is one of the top five in the insurance and home savings industry. Founded in 1905, it has evolved from a pure health insurer for civil servants into an insurance group offering coverage for all private households as well as small and medium-sized enterprises. Today, it is one of the most successful groups of its kind in Germany.

www.debeka.de

ABOUT INSIDERS TECHNOLOGIES GMBH

Insiders Technologies is a leading technology company and market-established software provider for Cognitive Process Automation. More than 3,000 customers from various industries rely on Insiders' innovative solutions to optimize their document-centric business processes. Based in Kaiserslautern, Germany, it is the most successful spin-off of the German Research Center for Artificial Intelligence (DFKI). It has made it its mission to transform state-of-the-art AI into tangible customer benefits. Insiders Technologies use the latest deep learning technologies and software solutions to understand heterogeneous content, extract business-relevant information, automate transactions and shorten response times. In doing so, the technological pioneering spirit and agility guarantee continuous innovations and products on the pulse of time.

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