PLANET

IDA Recognition

Unmatched OCR and ICR quality for the most challenging scenarios

IDA Recognition is the **core feature for data capture** in PLANET AI's IDA Suite. Despite scenarios like distorted, poor-quality scans with machine-print and difficult-to-read handwriting, IDA Recognition delivers **OCR and ICR results with exceptional accuracy**. As a result, there is a reduced need for manual corrections, leading to **enhanced straight-through processing**. Furthermore, downstream processes utilizing natural language processing (NLP) technologies benefit from high-quality input data with significant improvements.

KEY FEATURES

Patented PerceptionMatrix

IDA Recognition leverages PLANET AI's patented PerceptionMatrix capability to effortlessly capture the most complex documents. This approach ensures that all possible transcriptions of a given text are preserved without any loss of information, resulting in ground-breaking accuracy.

Wide scope of scenarios

IDA Recognition captures machine-printed and handwritten text, checkboxes, tables and historical scripts, even in poor-quality scans with rotated, skewed print. No prior binarization is necessary.

Automatic language detection

IDA Recognition offers language models for Western languages (Latin script) that have been refined over years. It can automatically recognize multiple languages and autonomously apply the appropriate language model.

PRODUCT CONFIGURATIONS

Advanced OCR:

- Western languages (Latin script)
- **Input**: PDF (incl. AcroForm fields, images, OCR, plain text), various image formats (.jpeg, .png, .tiff, .tif, …)
- **Output**: PDF, PDF/A, JSON, hOCR, .tiff

Add-on options:

- Barcode Recognition
- Entity Finder (highlighting, redaction)
- Historical Scripts
- Non-Latin Script Languages[BETA]
- Table Recognition

IDA Recognition can be utilized as a **client-server application** or integrated as a software development kit (**SDK**).

Comprehensive PDF capabilities

OCR results can be stored as PDFs with text layers containing the generated transcriptions. IDA Recognition supports PDF and all PDF/A conformance levels for efficient document archiving. Additionally, the output PDFs can be searched using our patented PerceptionMatrix.

Versatile JSON output format

By capturing documents using IDA Recognition, you can easily access them for subsequent tasks in downstream processing any time. This is made possible by a versatile JSON format.

Easy deployment and integration

IDA is deployed either on-premises or in a (private) cloud as a Java application or containerization using Docker. IDA Recognition can be utilized as a client-server application or integrated as an SDK. For more information, please contact us or refer to the software documentation.

HOW IT WORKS

Neural networks

IDA Recognition utilizes multiple neural nets in **automatic rotation detection**, **text finding**, and **reading**. They have undergone extensive training on large datasets over the years. As a result, Perception Matrices are created, based on sequential processing and represented in an abstract metadata format.

Decoding

Decoding describes the process of transforming the abstract Perception Matrices into **human-readable transcriptions**. IDA Recognition offers three decoding options:

1. **Raw reading** returns the highest-scored transcription from the PerceptionMatrix (referred to as "best path"), making it the fastest decoding method suitable for machine-printed text.
2. **Language models**, trained neural networks, perform especially well on handwriting. They have been refined for years and represent the second-fastest decoding method.
3. **Dictionaries** process results based on a weighted list of words, sorted by their frequency in a language. A dictionary is ideal for identifying specific terms in handwritten text.

AVAILABLE LANGUAGES

IDA Recognition offers character recognition for Western languages that use the Latin script. Pre-trained language models to further enhance the recognition results are provided for the following languages:

- Czech
- Dutch
- English
- French
- German

- Italian
- Latin
- Norwegian
- Portuguese
- Slovene

- Spanish
- Swedish
- Swiss German
- Turkish

Arabic and Chinese (simplified) are available as an add-on (Non-Latin Script Languages[BETA]).

Additional languages available by request

ADD-ONS

Barcode Recognition

Supported codes:

1D		2D
CodaBar	EAN8	Aztec
Code39	EAN13	DataMatrix
Code93	ITF	PDF417
Code128	UPC-E	QR

Historical Scripts

Support of historical blackletter scripts (also referred to as Gothic) and historical handwriting styles (e. g. the German Kurrent and Sütterlin) for the following languages: English, French, German, Latin, Italian.

Entity Finder

Allows for the highlighting and the redaction of information based on either a list of words or regular expressions.

Non-Latin Script Languages[BETA]

- Arabic
- Chinese (simplified)

Table Recognition

Interpretation of table structures on documents.

For more information, please refer to the software documentation.