

IBM Cloud Pak for Automation: Automation Document Processing (ADP)

Overview

Clandis Baker
WW CP4BA SWAT – Document Processing Products

Dan Ouimet (On Vacation)
WW Technical Sales – Document Processing Products

Purpose

Gain awareness of new offering

How does it fit with the rest of IBM Capture

Learn how to position and evaluate for fit

Demo

Be able to present/prepare for a customer,

– Dan Ouimet

Preview – Early info sharing in advance of GA

– Dan Ouimet

Perfection

Perfection is a **flawless** state where everything is **exactly right**.

It can also be the action of making something **perfect**.



The Extraction of Data via Optical Character Recognition (OCR)

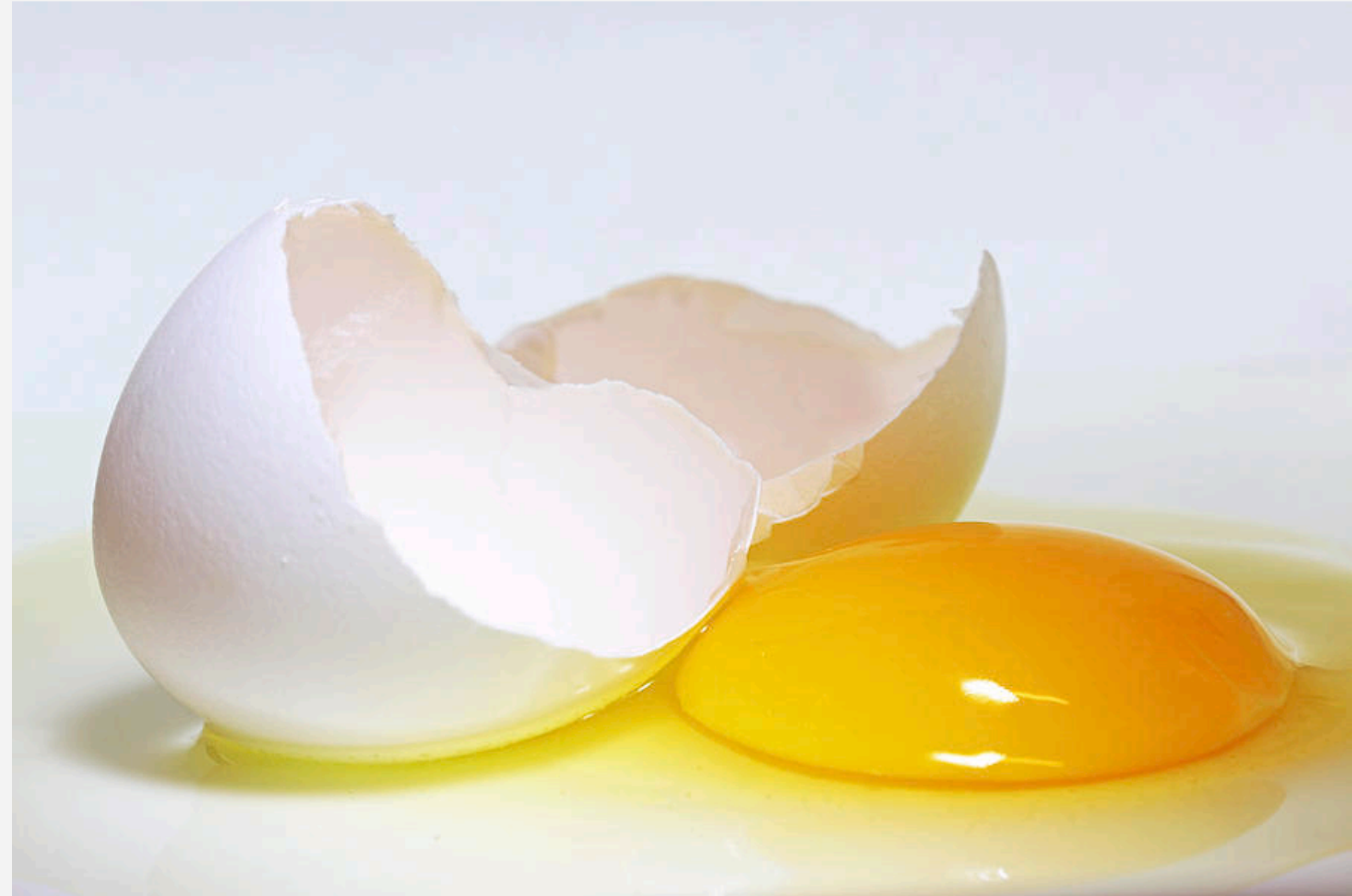
Is NOT Perfect.

If Social Security Number is: 312-XX-XXXX

OCR extracts as 812-XX-XXXX how important is that?

NO OCR ENGINE IS 100% ACCURATE

This is where Automation Document Processing comes in



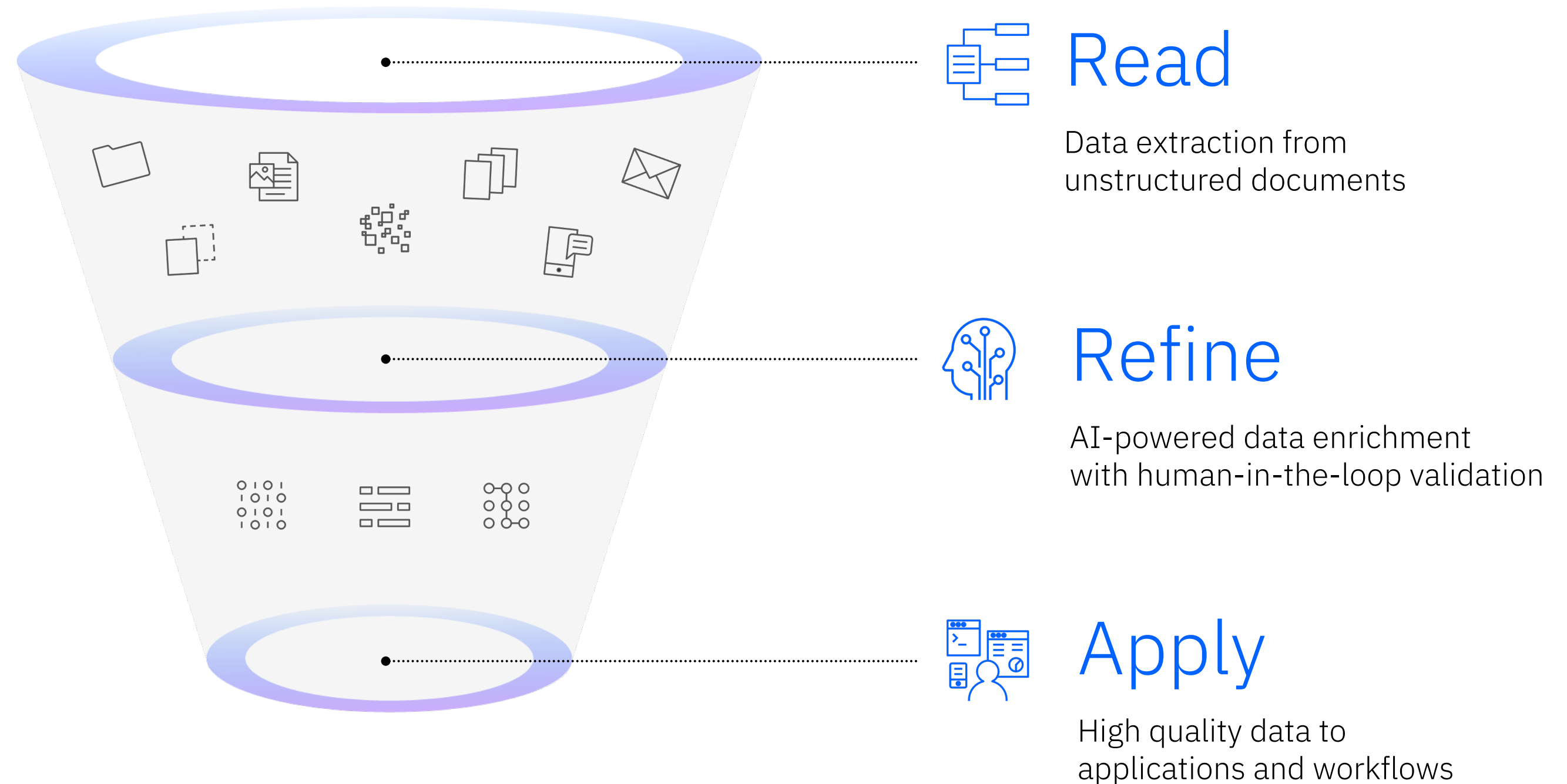
Exclusive to the Cloud
Pak for Automation

IBM Automation Document Processing

What is it?

AI-powered services
that automatically
reads and corrects
data from documents

A low-code solution
within the Cloud Pak for
Automation that quickly
builds, trains and deploys
document classification
and information
extraction applications.



More than just an evolution of Content Analyzer

Feature	Automation Document Processing	Content Analyzer
Machine learning models	✓	✓
Deep learning models	✓	
Pre-trained models for popular document types leading to higher levels of accuracy and fewer samples needed to train	✓	
Data extraction support for checkboxes, tables and composite fields	✓	
No-code experience for training and setting up document processing workflows	✓	
Automatic data standardization and error correction	✓	
System T extractors for unstructured text extraction	✓	
Low-code application builder with pre-defined templates and toolkits for document processing applications	✓	
Document processing application for human in the loop verification and correction of extracted data in real-time	✓	
Seamless integration with FileNet Content Manager and the Cloud Pak for Automation capabilities	✓	
API for real-time extraction and classification	✓	✓

Note:

- Automation Document Processing will replace Content Analyzer (CA) in the Cloud Pak for Automation
- CA on Cloud as a standalone SaaS offering has been announced end of market
- CA on Cloud will remain as a component in DBAoC until Automation Document Processing is available as SaaS in 2021

Strategy Automation Document Processing

Build unified pipeline for extracting data

- Capture all without having to do it manually

Simplify and accelerate builds

Smaller toolbox

- Think differently than in past with Datacap
- No need to granular actions
- No need to spend months configuring

Very aggressive roadmap for 2021 and beyond

Deeper Dive

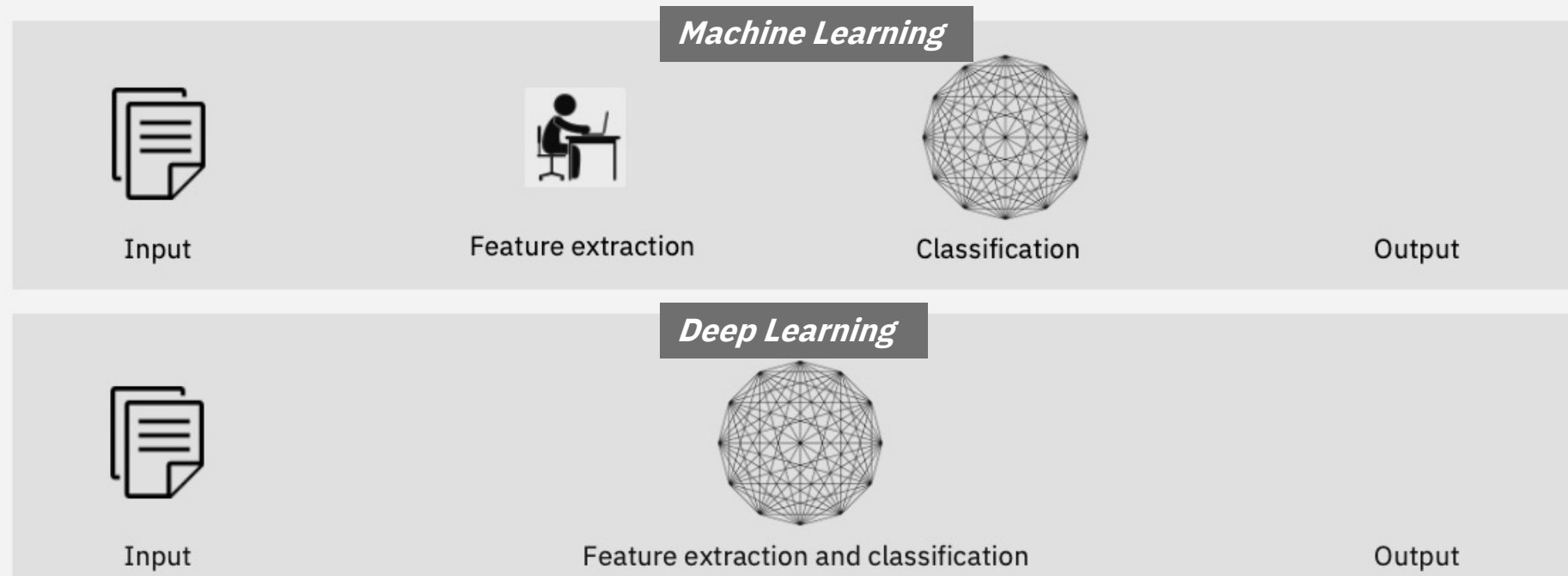
Deep Learning

Deep Learning vs Machine Learning

Good articles:

<https://parsers.me/deep-learning-machine-learning-whats-the-difference/>

<https://medium.com/ai-in-plain-english/artificial-intelligence-vs-machine-learning-vs-deep-learning-whats-the-difference-dccce18efe7f>



Machine Learning

- You upload then identify / mark images.
 - This is a cat, this is a dog, this is the phone number, this is the name.
- Human helps
- Effective for simpler data sets

Deep Learning with ADP

- Interface enables easy training of out of the box deep learning models for automatic document classification and data extraction
 - You upload documents, it applies many layers of algorithms (neural networks) to uncover patterns
- Effective for complex data sets. i.e., Address
 - Construct composite objects to group important sets of data together to bring meaning to data extracted

Why Deep Learning in ADP?

Train document types / data fields without requiring Data Science expertise or coding skills

Automatically finds and suggests data fields by analyzing sample documents with no prior training

No coding needed to train, test, deploy and use deep learning models

For this SSA application, the system is quickly trained on **additional fields** for the Applicant Info, the Mother's Info, Father's Info and a few form specific fields.

Document Training:

- Applicant Info
 - Name
 - First name
 - Middle name
 - Last name
 - Social Security Number
 - Date of Birth
 - Place of Birth
 - Citizenship
 - Ethnicity
 - Race
 - Sex
 - Phone Number
 - Mailing Address
 - Street
 - City
 - State
 - Zip code
- Mother's Info
 - Name
 - First name
 - Middle name
 - Last name
 - Social Security Number
- Father's Info
 - Name
 - First name
 - Middle name
 - Last name
 - Social Security Number
- Previously applied
- Previously used name
- Previously used DOB

Positioning Document Processing

Should I lead with Document Processing?

How can I decide?

What about Datacap with Document Processing?

Leading capability for document processing

Product	Strategy
IBM Automation Document Processing	Lead document processing capability for the Cloud Pak for Automation
IBM Content Analyzer	Will be replaced by IBM Automation Document Processing
IBM Datacap	Lead with the Cloud Pak and IBM Document Processing, use Datacap for specific use cases
IBM Document Processing + Datacap	Expand Datacap operations with IBM Document Processing to support a wider range of applications

Use Datacap for specialized use cases

Datacap

- Handprint, cursive recognition*
- Signature validation*
- Check processing*
- ID processing
- Languages beyond English, French and Spanish

Choose Datacap where specialized capture use cases and expanded language support are essential to the deal

*Requires Datacap add-ons

The screenshot displays the Datacap Navigator application window. The title bar reads "Datacap Navigator". Below the title bar, there are two tabs: "Job Monitor" and "NVerify". The "NVerify" tab is active. Below the tabs, there is a row of buttons: "Submit", "Hold", "Previous Page", "Next Page", "Previous Problem", "Next Problem", "Next Low Confidence", and "Run Validations".

The main content area is divided into two sections: "Image Viewer" on the left and "Field Details" on the right.

Image Viewer: This section contains a large image of a car rental agreement. The image is titled "Car Rental #1" and "Rental Agreement". It shows a pickup location of "New York (JFK)" and a return location of "New York (JFK)". The agreement includes details about the car type (Full size), options (GPS Navigation, Child Seat, Fuel Service), and the total cost (\$582.77).

Field Details: This section contains several input fields for the car rental data. The fields are:

- Pickup_Date:** Mon, Oct 5, 2020
- Pickup_Location:** New York (JFK)
- Return_Date:** Fri, Oct 9, 2020
- Return_Location:** New York (JFK)
- Car_Type:** Full size
- Total_Cost:** \$582.77

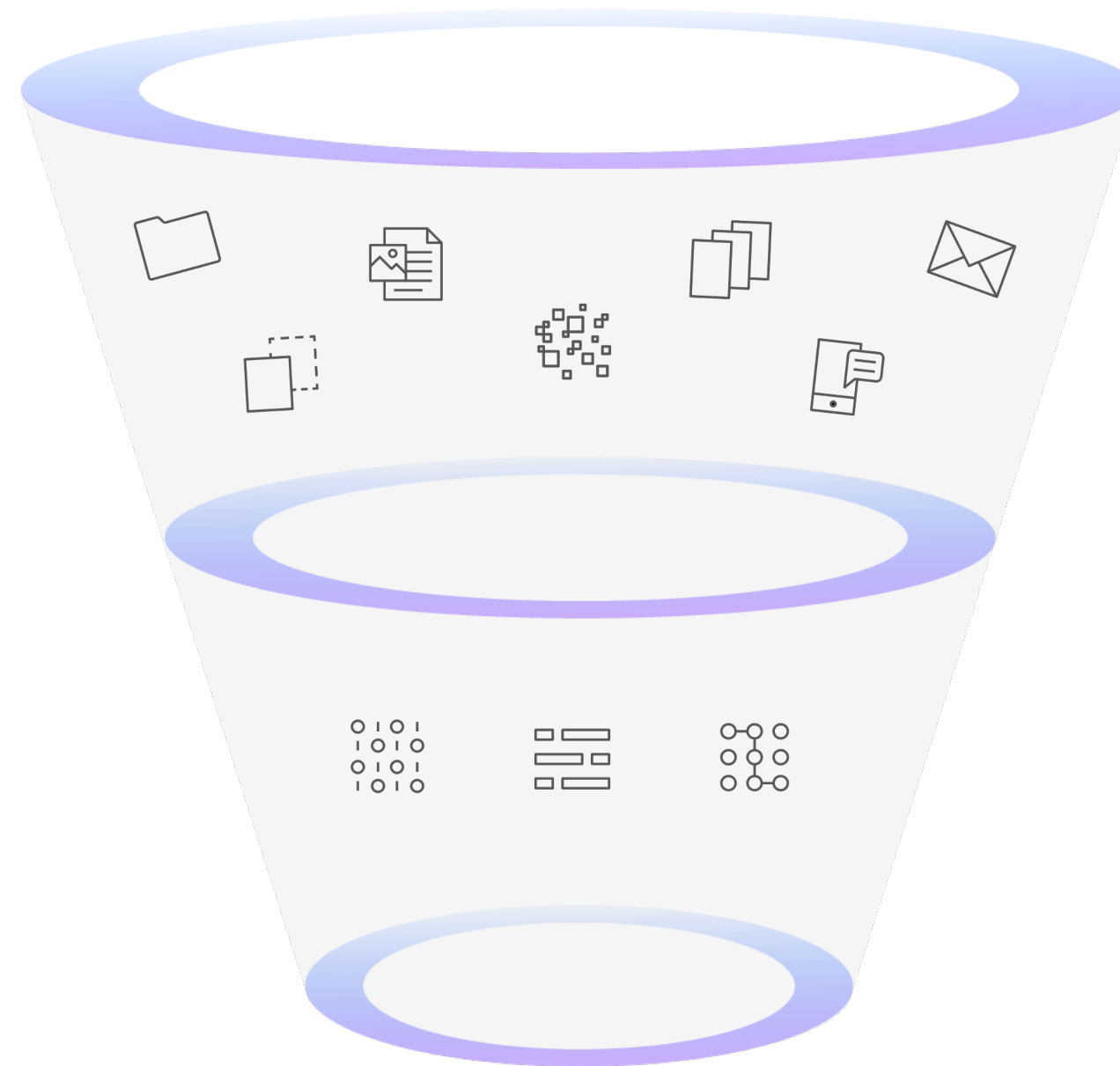
The "Options" section is also visible, showing a list of options with checkboxes:

- ☒ GPS Navigation
- ☐ Child Seat
- ☒ Fuel Service

Automation Document Processing with Datacap

Datacap

- Fax, email, scanning, file upload, folder scanning
- Image enhancement
- File format normalization
- Document separation



IBM Automation Document Processing

▼ Leverage intelligent document processing for new Datacap applications addressing use cases previously that were too costly or complex

▼ Add Datacap for document capture workflows

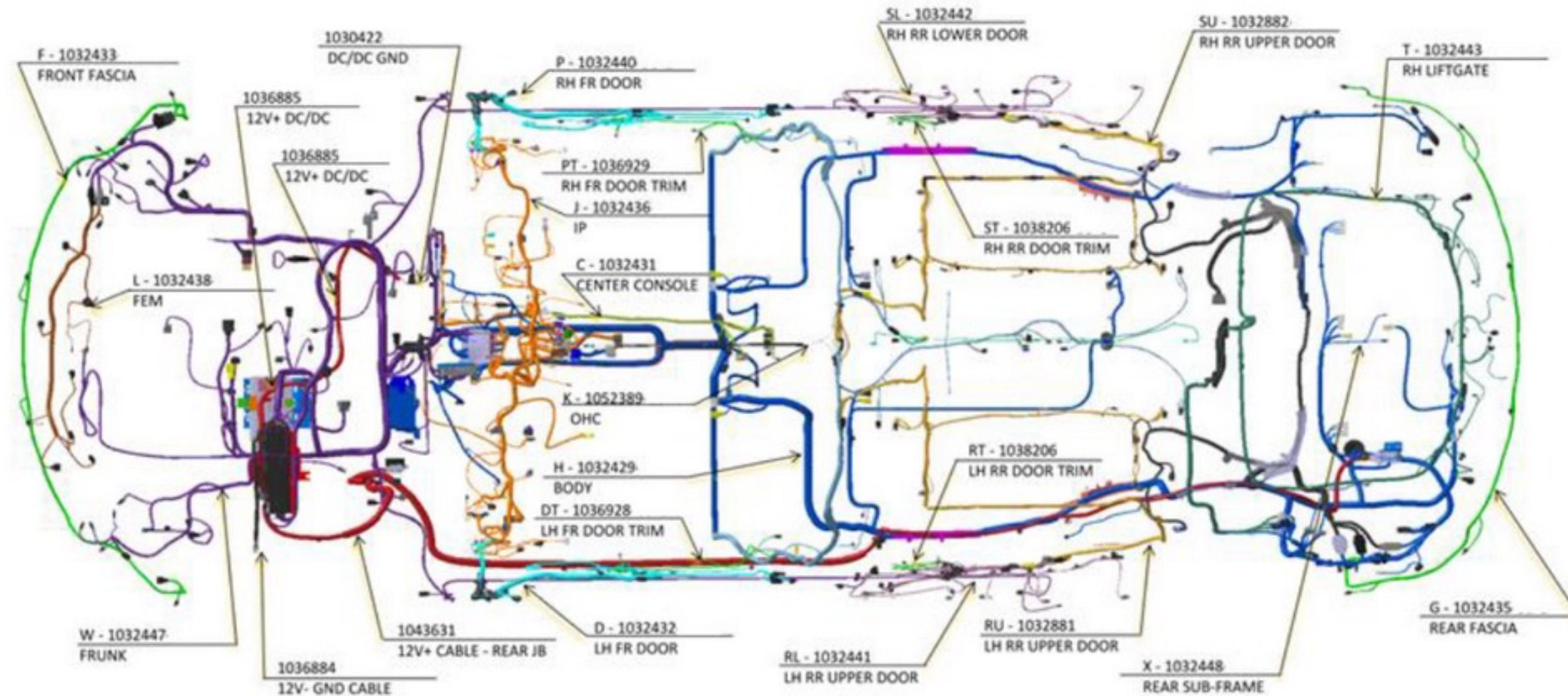
Peek under the hood / Demo



Getting Ready For Custom Demo – Let's break it down

TESLA

MX 12V System 1030412



Available Document Processing clusters

	Private project Good for private customer documents	GPU GPU is installed on this cluster. Allows for the object detection, deep learning.	Enablement / Showcase Reserved for enablement	Opp qualification required Cluster restricted. Requires comprehensive qualification	Notes
Cluster 1 (preview)	✓	✓		✓	Short term
Cluster 2 (FS03)		✓ available on-demand only		Client restricted to storing content < 30 days.	GPU access is time limited
Cluster 3 (FS04)			✓		Reservations only

Demo Assets

<https://ibm.box.com/v/CaptureCenterOfCompetency>

Several assets have been developed for you



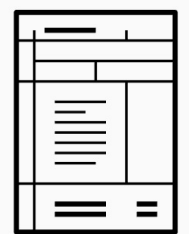
Invoices / POs / Tax Forms

Show how you can train and extract fields from invoice documents. Provides sample images, demo script, both design and runtime demo.



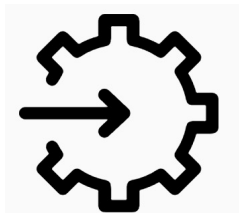
Seller Guidelines and Misc Items

Tips and tricks you should know about configuring and delivering an ADP demo, which product to lead with, ROI calculations,



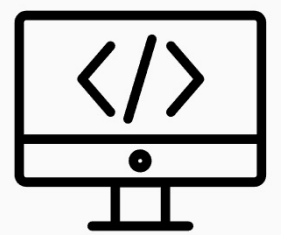
Recordings

Demo recordings, feature / training / nite sized recordings (TBD)



Datacap with ADP

Customer has Datacap? Maybe customer wants to use Datacap for ingestion or document separation? We have a demo ready to go. It is configured for POs



API - Python

Sample Python code is available on Github. We have a fully configured config.json file available to allow you to demonstrate API integration. Uses the PO demo.



Enablement materials

You can find the Faststart enablement materials here as well

Opportunity Qualification

Budget - list price \$290k (discounts will vary)

- + Installation services which must be budgeted

- + Hardware / Cloud costs

Not ideal for table extraction. Improved tables slated for Q4

English, Spanish, French

Custom Demo? What to expect

OOTB Templates are NOT full solutions – Just a bunch of fields created for you.

Training requires 100s of samples potentially
Time! (Could be 2-3+ weeks of work)

- You will need time to learn ADP

- Time to annotate docs (~5 mins per doc)

- Potentially multiple training runs (each 10-24 hours)

- GPU required - factor in potential congestion

Set expectations that are reasonable. Ask customer what would be acceptable

Understand input/output, validation, field type requirements

How to get access to ADP

Qualify Opportunities

Contact sales leaders

Paul Mcknerney for NA
pmcknern@us.ibm.com

Jay Boileau – WW
boileau@ca.ibm.com

Qualification Questionnaire:
<https://ibm.box.com/s/s2sshiwy9jnhqff75sa4q5ibhuexacp8>

Provision

Qualified opps will be forwarded to provisioning team

You will receive credentials and an ADP project. Could take a few days.

Alternatively, provision your own cluster (see later slide)

Enablement cluster

For reservations contact

Daniel Ouimet
douimet@ca.ibm.com

Key links

Resource	Link
Sales kit	https://ibm.seismic.com/Link/Content/DCUccKPMspfkG3io6-8oVApQ
Center of Competency	https://ibm.box.com/v/CaptureCenterOfCompetency
Knowledge center	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/20.0.x?topic=processing-what-is-automation-document
Self provision installation	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/21.0.x?topic=installing-kubernetes
Architecture	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/20.0.x?topic=processing-deployment-architecture
Github API sample	https://github.com/ibm-ecm/content-analyzer-samples
FAQ	https://ibm.seismic.com/Link/Content/DCQRPHHa0dbkuk5rLKDu4Tqw
ADP Slack channels	<div>#automation-document-processing-sales</div> <div>#automation-document-processing-techsales</div>

Contact list

Resource	Role	Email
Ben Antin	Product Manager ADP	bantin@us.ibm.com
Mira Kim	Product Manager ADP	mira.kim1@ibm.com
Jay Boileau	Worldwide Sales Leader - Capture	boileau@ca.ibm.com
Dan Ouimet	Worldwide Technical Sales Leader - Capture	douimet@ca.ibm.com
Burt Hughes	Partner ecosystem	buhughes@us.ibm.com
Expert Labs	Torbjorn Johansson	torbjorn@us.ibm.com
Tom Al-Hamwy	Program Director, Digital Business Automation - SWAT	talhamwy@ca.ibm.com

