



Stories from the Field

Implementing AI & Hyperautomation Solutions







Delivering great experiences using humans alone is not scalable or sustainable...

89%

of employees report that sorting through an inbox of emails, IMs, and requests is the most unpleasant part of work.

Source: https://www.forbes.com/advisor/business/digital-communication-workplace/

~50%

of workers report their productivity being affected by ineffective communication.



TECH360°





Christina Kucek, PMP

Executive Director of Intelligent Automation, CAI

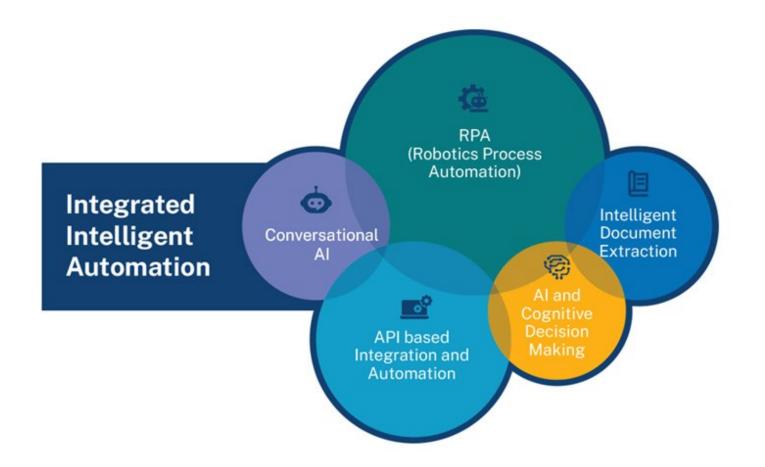
Christina has been assisting clients in their automation journey, from Artificial Intelligence and Machine Learning to RPA and Intelligent Document Processing for 12 years.

Her solutions drive efficiency, cost savings, and a competitive advantage. Within CAI's Intelligent Automation Practice, her primary focus has been delivering hyperautomation solutions for various business units including Finance, Supply Chain, IT, HR, and Customer Services in both the public and private sectors.





What is Hyperautomation?





process management (BPM) and intelligent business process management suites (iBPMS), integration platform as a service (iPaaS), low-code/no-code tools, packaged software, and other types of decision, process and task

Hyperautomation is a

approach that

business-driven, disciplined

organizations use to rapidly identify, vet and automate

as many business and IT

processes as possible.

Hyperautomation involves the orchestrated use of multiple

technologies, tools or platforms,

machine learning, event-driven

software architecture, robotic

including: artificial intelligence (AI),

process automation (RPA), business

Source: Gartner 2023

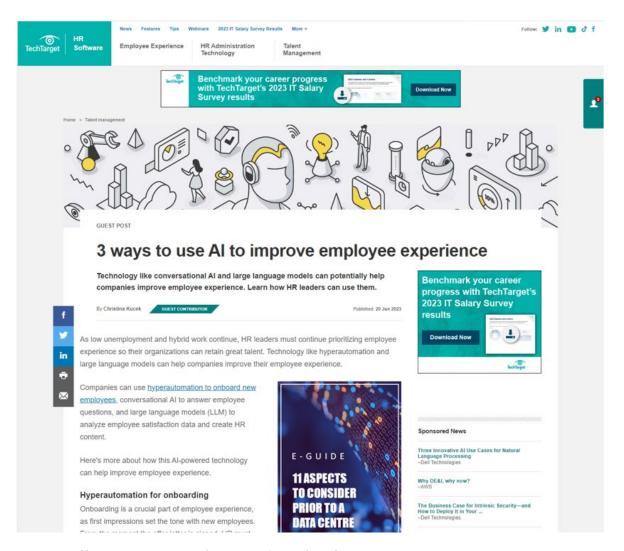
automation tools.



Hyperautomation for Employee Experience

Tools and Technologies:

- 1. Hyperautomation for Onboarding
- Conversational AI
- 3. Context Mining & Email Routing
- 4. Employee Insights using LLM's and Generative Al



https://www.techtarget.com/searchhrsoftware/post/3-ways-to-use-Al-to-improve-employee-experience



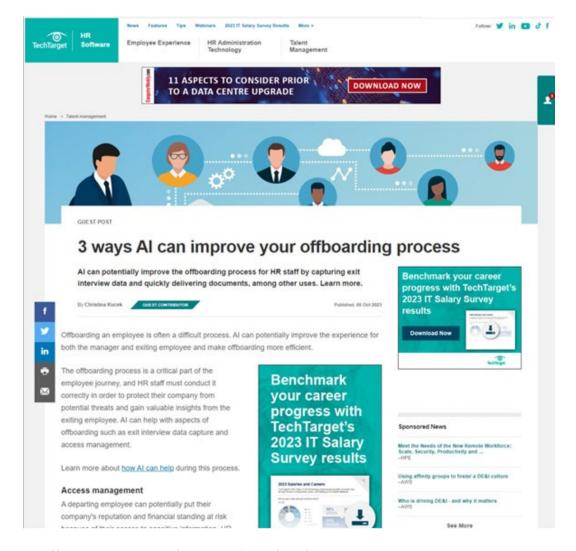




Hyperautomation for Employee Offboarding

Tools and Technologies:

- 1. Access Management
- 2. Exit Interview Distribution
- 3. Analyzing Exit Interview Data



https://www.techtarget.com/searchhrsoftware/post/3-ways-Al-can-improve-your-offboarding-process



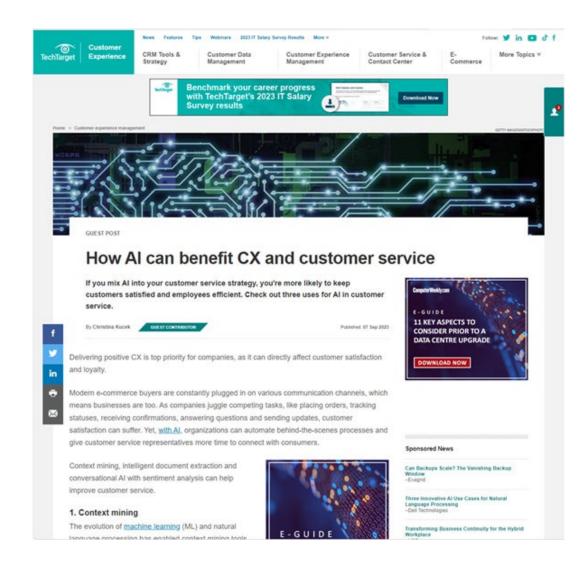




Hyperautomation for Improving CX

Tools and Technologies:

- Al Context Mining
- 2. Intelligent Document Processing
- Conversational AI
- 4. Deep Personalization



https://www.techtarget.com/searchcustomerexperience/post/How-Al-can-benefit-CX-and-customer-service







Intelligent Document Processing

The U.S. Postal Service started using OCR

USPS started using OCR machines to sort mail based on zip codes

Intelligent Character Recognition (ICR) is introduced

The introduction of machine learning in OCR brought about ICR, which could learn and improve its recognition capabilities over time.

Intelligent document processing with machine learning

IDP with ML has become an essential tool in many industries. It's used for data extraction, automating data entry, improving accessibility, and more.

1965 1990s-2000s 2014 2021 1914 2017

Optical Character Recognition (OCR) technology patented by **Emanuel Goldberg.**

Developed a machine that read characters and converted them into telegraph code.

OCR spreads to PC's and **Smartphones**

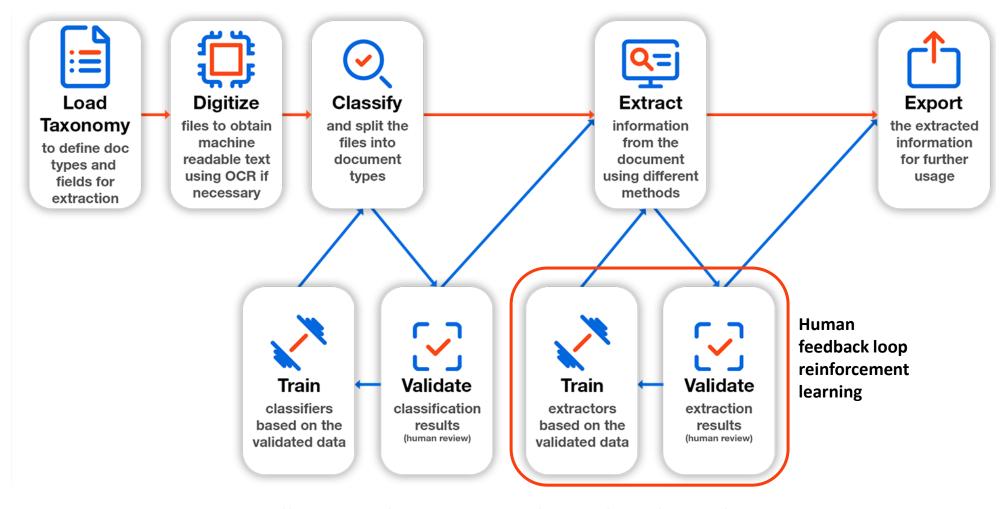
This allowed for easier digitalization of printed documents and immediate digitization and translation of text,, increasing accessibility and efficiency in offices worldwide.

Intelligent Document Processing (IDP) is introduced thanks to AI & ML advancements

IDP not only recognizes text but can also understand the context, making it capable of processing complex documents like invoices, contracts, and forms.



Steps: Intelligent Document Processing



https://docs.uipath.com/document-understanding/standalone/2020.10/user-guide/introduction



Context Mining: Email & Request Routing

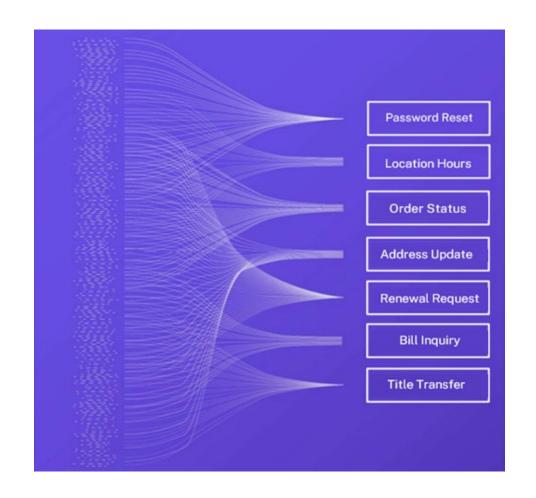
Ticketing Systems Keyword Classification & Logic Context Mining Solutions Routing ServiceNow, Jira, Remedy ticketing **Leveraging Regular Expressions** Advanced AI technologies are now systems began capturing and (Regex) and conditional statements capable of reading and understanding to determine how to route unstructured data such as emails and routing user requests. using this information to route requests. requests accurately. 2000's 2012 2022 1990s 2010 2015 Webforms API's Chatbots **APIs (Application Programming** Chatbots allowed businesses to HTML 2.0 introduced form-based Interfaces) became extensively used to file upload, where users could fill automate and route customer service route requests between different inquiries. They used conditional out a form with text fields, select software applications, allowing them to statements and NLP to route requests options, and submit it to a server communicate with each other. to the correct department or provide for processing. automated responses.





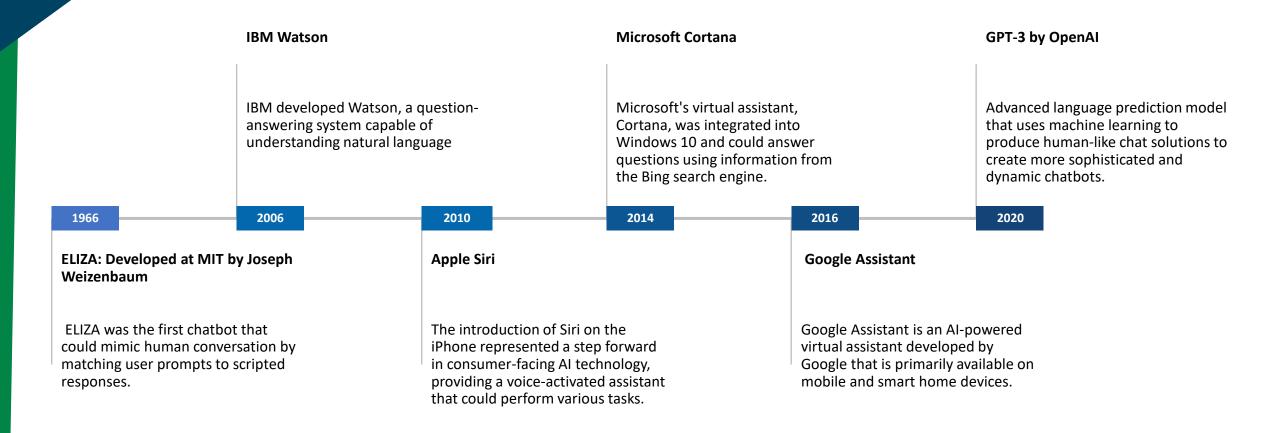
Al Context Mining & Request Routing

- Unstructured data comes in from all over.
- Using large language models, and neural networks, we're able to understand the context, sentiment and urgency of each email request and route it appropriately.
- Automating email or web form traffic to the correct inbox or fully automating the request completion.





Chatbot Technology







Conversational AI Technologies

Multi-Modal Interactions

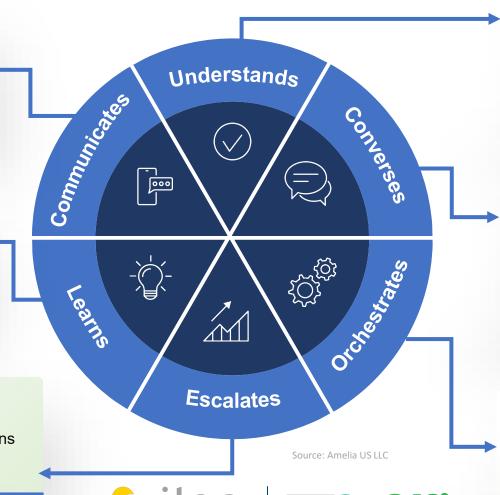
- Voice Conversations
- Texting (SMS) and Email
- Website and Chat Applications
- Social and Mobile Apps

Observational Learning

- Reduces Abandonments
- Minimizes Escalations

Human-in-the-Loop

- Al Contextual Recommendations
- Contextual Automations
- Auto-Translates Languages



Classification to Comprehension

- Understands Long Explanations
- Grasps Incomplete Sentences
- Ascertains Multiple Intents
- Knows More Than 100 Languages

Human-Like Conversations

- Remembers Interactions
- Handles Interruptions
- Changes Context
- Detects Sentiment

Scalable, Flexible and Secure

- Business Applications
- Data Sources & API's
- Knowledge Management Systems



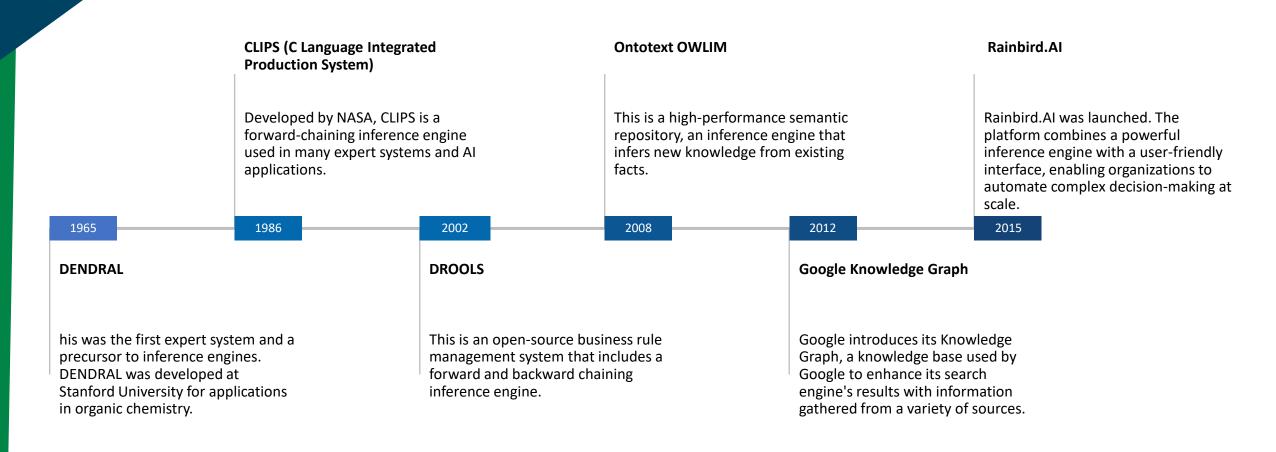
Bhavin Shah: CEO of Moveworks on Conversational Al







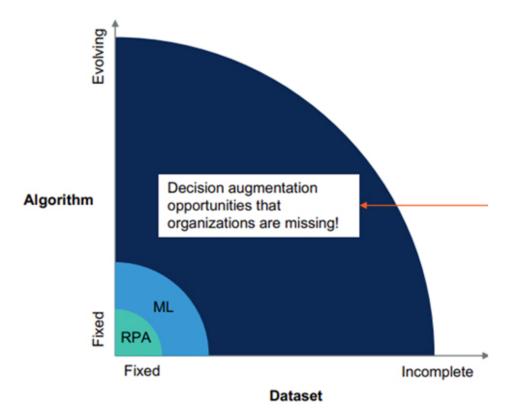
Inference Engines & **Expert Systems**







Cognitive Decision Support/Inference Engine



Expert decisions that are time-consuming for human experts.

If these decisions can be sped up and made more consistent and transparent, they provide a vast untapped opportunity to build decision services that improve internal efficiency and/or can be monetized

Source: Rainbird Al





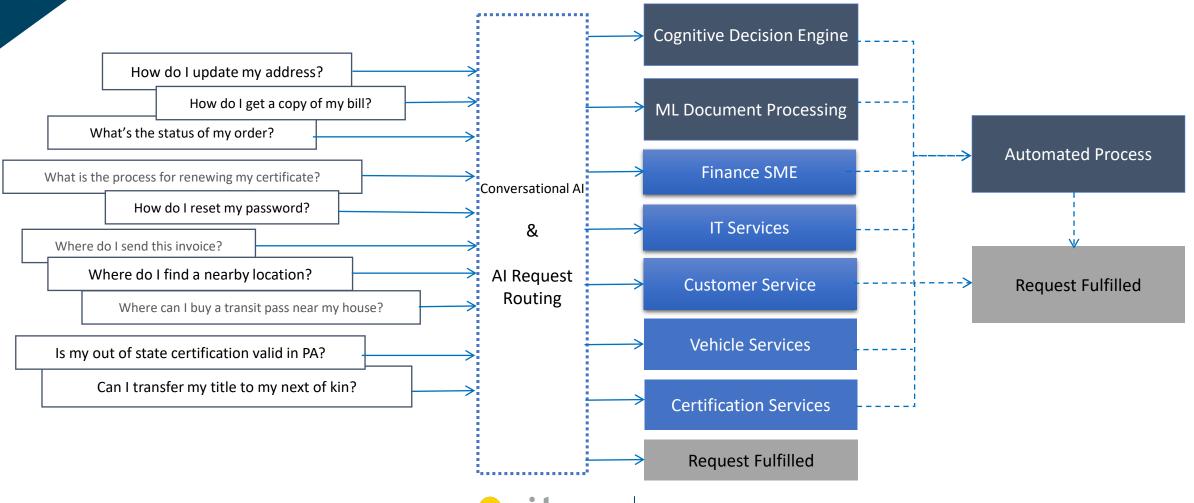
James Duez, CEO and Co-founder, Rainbird.Al on black box vs. glass box







Request Fulfillment with Hyperautomation





CAT We power the possible™



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