



MAKING AUTOMATION INTELLIGENT, WITH AI

Automation is here to stay, with not just corporations but also government agencies making a concerted push for automation to help cope with staff crunches and downsized budgets. Several US government agencies are using Robotic Process Automation (RPA) to reduce error, improve compliance, and focus employees on higher-value work, according to the [2020 Budget of the US government](#). The CFO's Office in General Services Administration automated tasks that consumed about 12,000 labor hours per year and did them at half the cost, while NASA's Shared Services Center has four bots running nine different processes, including distributing funds, procurement, and scanning files.

The above instances speak volumes about automation being the top strategic agenda for organizations. But this agenda should not run in a separate silo from the broader organizational agenda of digital transformation. Today, digital transformation is a journey and not a destination, and automation must go beyond simply replicating existing tasks/processes.

The need to go beyond simple automation is now becoming a top priority for organizations. Per the outcomes of a recent study by Greyhound Research, 83% of large, global organizations have either already started planning or implementing AI-driven automation, also known as intelligent automation, in the form of bots and other projects with the intent of creating new and ongoing value. These organizations are either already using or exploring technologies like machine vision, natural language processing (NLP) and machine learning (ML) to create an intelligent automation system capable of delivering far more potent capabilities.

SORTING 140,000 EMAILS A WEEK

Using AI-enabled **intelligent automation** not only ensures the expected outcomes of efficiency but goes beyond that to guarantee real transformation of common business processes like fraud prevention, brand management, customer service, software testing and development, and human resource management. Other examples where intelligent automation can add immense value is the ability to auto-scale existing bots, conduct sentiment analysis to drive decision making, classify unstructured data using advanced capabilities such as Natural Language Processing and Optical Character Recognition, among other areas.

A **financial services company**, an Infosys client, had a **very complex support environment** for over 1,000 applications, with over 140,000 emails - alerts from monitoring tools and communication from clients, partners, and others - coming into a collection of mailboxes every week. Infosys had the job of supporting these applications, under which a critical function was **sorting the alerts and communication** received in the mailboxes and creating incidents, service requests, and providing email responses wherever required. For this task we had a **24*7 L1 team of over 76 people** manually reading, analyzing, and classifying these emails and then following up with the correct L2 team, end-users, and business partners. While actionable emails formed only 5 percent of the communication coming our way, the intense and laborious task of manually sorting them from the massive stream of messages meant **high risk of human error** and hence higher likeliness of missing the stringent SLAs.

AN EMAIL-READING BOT

The Infosys team built an **AI-based, self-learning email bot** for analysing and classifying emails and taking appropriate action. The bot's underlying technology included:

- **A Natural Language Processing** engine
- **Convolutional Neural Net** (CNN) – an artificial neural network for supervised learning
- **Infosys Infrastructure Management Services** (IIMSS), a unified command center for datacenter, infrastructure, cloud, applications, security, network and business services. It also includes an orchestration automation engine for event management, correlation, context-driven recommendations, machine learning and knowledge-based self-learning

The key was to sort actionable, non-actionable, conversational and acknowledgement emails and ensure business context. We used unsupervised machine learning algorithms for **pattern analysis of historical data** for accurately classifying emails for subsequent action. Further, to extract the content, emails were processed by the NLP engine and passed through the CNN-based text classifier to determine the right action to be taken and predict attributes such as impact, priority, assignment groups, etc. necessary for invoking the necessary API as part of the action executor framework. The IIMSS's Autonomics Toolkit was used for executing actions while its **data ingestion framework** was leveraged to read emails with low latency and at scale. Emails that could not be processed by the bot were flagged for manual inspection by the L1 team.

Infosys delivered on the critical task of automating email processing and was able to successfully **process 71% of the weekly 140,000 emails via the bot**. We also successfully delivered 100% consistency in processing emails thereby **reducing manual errors and meeting the stringent SLAs** set out for the L1 team. This change also helped **reduce the effort of the L1 team by 15%**, and the team was now able to focus on critical business user emails which are automatically flagged by the bot. Reduction in the effort has also helped redirect the extra bandwidth in the team for L2 support.



MAKING AUTOMATION INTELLIGENT, WITH AI - THE FIVE KEY TAKEAWAYS

- 1 **Identify** business processes with a high level of repeatable tasks and define how AI and intelligent automation can add value
- 2 **Conduct** PoCs to better understand the impact and scope of AI and intelligent automation in your organization's processes
- 3 **Include** advancements in AI and ML to make automated business processes truly intelligent and scalable
- 4 **Plan** for manual intervention in cases too complex for automated processing
- 5 **Evangelize** the power of automation and train employees to work efficiently with bots for better outcomes from business processes

BIG LEARNING:

As organizations continue to battle a tough economic environment, evolving and stringent compliance norms and most importantly, a hyper-competitive marketplace with new entrants in the form of digital natives, they are having to not only think of new strategies to adapt and stay afloat, but also search for tools and means to be more efficient. Among other things, RPA has come to the rescue of many such organizations and helped deliver efficient processes that are both cost-effective and reduce risk. At Infosys, we believe while RPA is a great starting point, it's only an intermediate answer and organizations with bold aims for the digital world must look at leveraging AI, ML and other technologies for their business processes to truly benefit from intelligent automation.

WE DID THIS FOR THEM. WE CAN DO IT FOR YOU.

To know more about implementing RPA for your organization, reach out to us at askus@infosys.com

For more information, contact askus@infosys.com

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