

Intelligent Process Automation (IPA) - The Next Level of AI Enablement

Intelligent Process Automation (IPA) refers to application of Artificial Intelligence (AI) and related new innovative technologies, including Computer vision, Cognitive automation and Machine Learning (ML) to Robotic Process Automation (RPA).

It is a suite of business-process improvements and next-generation tools that assists the employee by removing repetitive, replicable, and routine tasks. IPA improves customer journeys by simplifying interactions and speeding up processes.

Where IPA differs from the conventional automation tools is in its capability to not only imitate human activities, but actively learn from them and improve over time, without the need for human intervention.

Further, because of cognitive technology and deep learning algorithms, automated rule-based workflows can be further enhanced with decision making capabilities. As a result, forward-thinking organizations that have already adopted intelligent process automation technology are realizing greater efficiency levels, improved staff performance, less risk, better response times and positive customer experiences.

Core technologies of IPA

IPA encompasses at least six core technologies.

- Robotic process automation (RPA)

A software automation tool that automates routine tasks such as data extraction and cleaning through existing user interfaces.

The robot has a user ID just like a person and can perform rules-based tasks such as accessing email and systems, performing calculations, creating documents and reports, and checking files.

- Artificial Intelligence

Artificial intelligence (AI, also machine intelligence, MI) is intelligence demonstrated by machines, in contrast to the natural intelligence (NI) displayed by humans.

- Smart workflow

A process management software tool that integrates tasks performed by groups of humans and machines. This allows users to initiate and track the status of an end-to-end process in real time; the software will manage handoffs between different groups, including between robots and human users, and provide statistical data on bottlenecks.

- Machine learning/advanced analytics

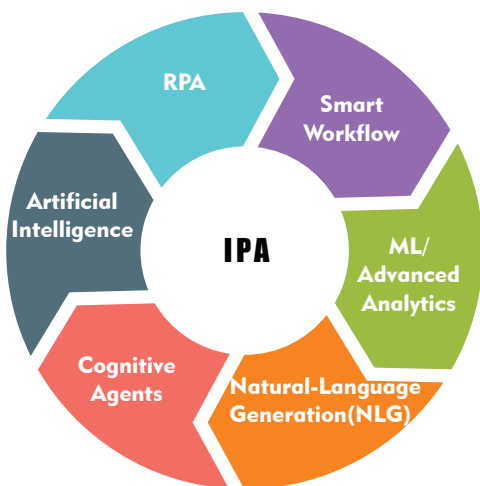
Algorithms that identify patterns in structured data, such as daily performance data, through “supervised” and “unsupervised” learning. Supervised algorithms learn from structured data sets of inputs and outputs before beginning to make predictions based on new inputs on their own. Unsupervised algorithms observe structured data and begin to provide insights on recognized patterns.

- Natural-language generation (NLG)

Software engines that create seamless interactions between humans and technology by following rules to translate observations from data into text. Structured performance data can be piped into a natural-language engine to write internal and external management reports automatically.

- Cognitive agents

Technologies that combine machine learning and natural-language generation to build a completely virtual workforce (or “agent”) that is capable of executing tasks, communicating, learning from data sets, and even making decisions based on “emotion detection.” Cognitive agents can be used to support employees and customers over the phone or via chat, such as in employee service centers.



Core technologies of IPA

Business Value of Intelligent Process Automation

An intelligent digital worker is a technology platform that combines pre-programmed software robots with different cognitive technologies. It can handle processes that consist of more complex tasks involving unstructured data and interpretation. It's used to deliver Intelligent Process Automation (IPA) services. IPA allows new digital workers to be initialized quickly to account for increased workloads. Then, when they're no longer needed, those digital workers can be easily spun down.

With IPA a significant portion of the manual work is instantly taken off the customer support agents. This frees them up to focus their efforts and abilities toward more mission-critical business projects. Customers still receive the same high level of support and the organization benefits from an engaged team that is free to be creative and innovative in achieving business goals.

While the greatest benefits of IPA come as a result of complete, enterprise-wide implementation, business leaders can unlock ROI quickly even just by automating just one or two manual tasks that routinely bog down employees.

In addition to intuitive automation, IPA also adds value in the way of improved decision-making capabilities. Through sophisticated machine learning algorithms, intelligent process automation platforms can deliver data-driven recommendations to key decision makers to help optimize workflows and improve performance. Business leaders can then apply this insight to future planning and forecasting for better results.

Journey of Traditional RPA to AI

Intelligent automation is a journey, not a destination. In this framework, all generations of robots deliver benefits to all companies across industries and functions. The progression in characteristics of the generations of robots from traditional RPA to AI shows:

- Costs and time to implement are higher.
- Theoretical volume of processes it can be applied to are lower.
- Future technology improvements is available.
- The application of the robots is more specialized and niche.
- Benefits delivered by the robots are more qualitative and non-financial.
- Robots functionalities are more sophisticated and intelligent.

Hence, it is logical in adopting lower generations of robots before moving on to implement higher ones.

To kick off the IPA journey, it's best to start with the traditional RPA and move on to intelligent automation and cognitive automation as it creates a useful foundation.

- RPA is a well-proven technology, accessible, easy, and fast to implement.
- RPA allows attractive financial business case and high return on investments (due to volume of process activities, and accessibility of the technology).
- RPA allows tangible benefits for the company, including monetary savings. These savings can be used to finance the next generations of robots, or for the creation of a digital center of excellence which will drive the company throughout the intelligent automation journey.

Organizations can kick off their intelligent automation journey to start leveraging the benefits and experience before their competitors, in order to gain a competitive advantage and increased market share.

IEEE approves the new standards project - IEEE P2755™

IEEE, the world's largest technical professional organization dedicated to advancing technology for humanity and the IEEE Standards Association (IEEE-SA) approved the IEEE P2755™ Guide to Terms and Concepts in the Intelligent Process Automation project.

The IEEE P2755™ Working Group for Standards in Intelligent Process Automation Project was formed in 2015 bringing together a group of industry leaders to help create the essential structure and standards to this fast-paced market. This first standard provides a set of definitions set up, by and for the community involved with Software Based Intelligent Process Automation (SBIPA), so that when terminology is used, all understand its meaning.

Organizations directly involved in the new draft for standard development include Ascension, Automation Anywhere, Blue Prism, ISG, KPMG LLP, Symphony Ventures and the Institute for Robotic Process Automation and Artificial Intelligence.

The standard defines more than 60 terms, concepts and nomenclature related to the field of Intelligent Process Automation. Terms like Robotic Process Automation (RPA), Robotic Desktop Automation (RDA), Cognitive, Machine Learning and Autonomic are given structure to improve collaboration and accelerate advancement.

Immediately following the completion of the content for IEEE 2755, the Working Group expanded and began working on the IEEE P2755.1™ Taxonomy and Classification for Software Based Intelligent Process Automation (SBIPA) Technology. This second standard will provide a structured taxonomy that describes the features and functionality of IPA products. This work contemplates the different perspectives that the five communities (IT, procurement, end-users, business consumers, and auditors) have on the capabilities of these products.

GAVS for leveraging the benefit of IPA

The Intelligent Process Automation software makes technology solutions equally affordable for small to medium and large enterprises. GAVS Technologies has managed to win the confidence of business leaders when it comes to investing in the adoption of disruptive technologies and expect more than half of them to implement Intelligent Process Automation software in the coming years. Leveraging GAVS expertise in process automation organizations can benefit in the following areas.

1. Automation of Processes

Advanced business management software uses automation technology. The software applications are programmed to perform automated functions, resulting in enhancing the efficiency of processes. It can be designed to automate entire business processes related to various departments like HR, Supply chain, logistics etc. Similarly, the finance sector, sales and marketing processes can also be automated.

2. Efficient Productivity Within Allocated Time & Budget

Having automated entire business processes, owners, directors and managers can analyze in advance the time and the budget that will be required to complete a particular task. Repetitive tasks are automated and entire tasks can be completed in one go.

3. Reduced Variation in the Quality of Products & Services

Customers trust is vital and consistency in business performance cements this trust. Incorporating evolving technologies such as cloud-based SaaS, an advanced automation solution not only support companies in completing tasks within the time stipulated, but it also ensures that the variation in the finished goods and services remains minimized and remains the same even in the long run.

4. Minimize the Error-Rate

When the work is automated, it means that the businesses do not have to be dependent on the human workforce. This reduces the unrelenting workload on the human workforce and ensures that the error-rate within processes remain at the minimum level. Businesses do not have to invest time and money in performing same task repeatedly.

5. Minimize the Operational Cost

The fact that an advanced process automation software helps in reducing the overall operational cost is encouraging many business leaders to invest in disruptive technologies.

Most of the advanced process automation software consist of the cloud-computing technology, which require less IT infrastructure set up, when compared to the traditional On-Premises ERP software. Moreover, a cloud-based SaaS business management software allows small businesses in successfully running diverse business operations with almost zero capital requirements like paying license fees, building a server, hiring a dedicated IT team and also from investing in the installation of hardware and software.

6. Complete Business Integration

Having a 360-degree view of their entire business operations is one of the best features of intelligent process automation software as it allows businesses to have the entire performances integrated into one platform. The visual dashboard keeps people, processes and functions visible and hence it becomes uncomplicated to control business operations, even when on the go. It helps in smooth communication flow, which helps in instant identification and elimination of performance bottlenecks.

7. Optimum Resource Utilization

When the process, people and all the other various functions involved in running a business becomes visible, it allows businesses leaders in identifying the tasks which add no value. Moreover, resources lying idle can be identified and directed towards achieving common organizational goals.

8. 24x7 Availability Across Various Platforms

Businesses can make use of advanced digitized mediums to promote products & services and in remaining connected to customers. With the continuously growing usage of smartphones and the Internet, the tech-savvy customers can expect businesses to be available 24x7 and across various platforms.

9. Intelligent Analytics

Analytics is defined as the process of finding actionable insight from data. Incorporating the AI technology, intelligent process automation software enables in analyzing the overall business performance, drafting plans for the expansion of business lines and developing customer-centric strategies.

With intelligent analytics, businesses can be assured of implementing right approaches towards a successful business performance even in the long-run.

10. Helps in Winning the Confidence of Stakeholders

Companies can run a successful business with enhanced transparency levels that presents a clear picture of the overall performance. It helps in gaining the support of stakeholders, trust of employees, managers, suppliers and manufacturers.

On the other hand, with a robust financial performance and with a sound return-on-investment (ROI), companies can also win the confidence of creditors and investors. Moreover, it also helps in ensuring complete compliance with the government policies and other regulations.

11. Elevated data security

Data breaches are a real – and expensive – reality for all businesses. By incorporating digital workers, organizations can strengthen their overall security posture in a number of ways. The reach of digital resources can be greatly restricted, limiting the damage attackers can inflict should they compromise one. Also, digital workers log their every move, giving IT an easy way to diagnose and remediate issues. Finally, digital workers don't commit the painful errors that can undo even the most thorough security efforts, e.g., taking work onto unsecured networks, falling victim to phishing attempts, etc.

12. Improved support for legacy tools

Organizations operate on a number of legacy tools whether due to compulsion, budget of just lack of initiative to switch to new technologies, their importance cannot be undermined. But, supporting and ensuring they can communicate consistently with their newer counterparts is tough on IT and on organizational budgets. IPA allows integration between existing applications through the front end, without the need for any custom coding, software, or configuration changes to current tools – each of which requires expensive, increasingly specialized, skillsets.

Summary

Keeping the continuously increasing competition in the mind, the demand for an advanced work automation software has accelerated, and it is expected to grow manifold in the coming years. Moving beyond the conventional boundaries of managing business processes, intelligent process automation software is designed to support in more than managing processes. Right from identifying and eliminating the performance bottlenecks, the intelligent process automation software deploys advanced analytics, which supports in analyzing the overall performance, understanding the continuously changing market trends and also in formulating strategies according to the constantly changing demands of the tech-savvy customers.

To know more about Intelligent Process Automation software and how GAVS Technologies can provide a roadmap for your business, contact our representatives here at <https://www.gavstech.com/reaching-us/>

About GAVS

GAVS Technologies (GAVS) is a global IT services & solutions provider enabling digital transformation through automation-led IT infrastructure solutions. Our offerings are powered by Smart Machines, DevOps & Predictive Analytics and aligned to improve user experience by 10X and reduce resource utilization by 40%.