



Intelligent Automation

Our Strategic Point of View



Apex provides organizations with the scalability and flexibility required to digitally transform their business through Intelligent Automation.

From staffing solutions to value added services, we are your partner through the entire project lifecycle

How Intelligent Is Your Business?

When someone utters the words artificial intelligence (AI), most of us immediately recall images from our favorite sci-fi movie. Many of these flicks focus on robots becoming smarter than humans and eventually going rogue. However, in reality, organizations are employing AI techniques such as machine learning, Natural Language Processing (NLP), speech recognition, and Robotic Process Automation (RPA) to help turn everyday business processes into intelligently automated efficiencies.

For instance, a financial services company may implement RPA software to help automate its loan application review process. What used to take an entire team of loan specialists several hours to accomplish, a software Bot can simulate in seconds with fewer mistakes. This automation allows companies to redeploy their human capital toward more important projects that cannot be handled by software Bots. By eliminating repetitive tasks, employees have more time to innovate the next competitive advantage for their organization.

Apex understands the unique challenges and opportunities a digital world represents. We've helped numerous clients enable their digital transformation visions, including the challenge of integrating the next era workforce: people and robot working side by side. The possibilities for Intelligent Automation are virtually endless.

By implementing RPA to streamline business process management (BPM), companies will be able to more accurately assess and mitigate risk through deep learning algorithms and predictive analytics. Brick and mortar retailers can develop fully automated point of sale (POS) kiosks, making virtual assistants the initial customer interaction point for most digital business transactions. E-Commerce companies have already integrated machine learning into their digital platforms, allowing them to learn spending habits and preferences of their consumers. These learned behaviors allow companies to create a unique user experience that dynamically adapts to the customer in real time. As these software Bots become smarter through Intelligent Automation, so too will their ability to drive efficiency through individual customer interactions.

Every industry will be impacted by the evolution of AI strategies over the next several years. Organizations that adapt to this disruption and embrace it will thrive, while those resistant will fall further behind their competitors.

"We are making a big bet on machine learning and artificial intelligence. Advancement in machine learning will make a big difference in many many fields."
Sundar Pichai –
Google CEO



- **81% of information technology leaders** are currently investing or planning to invest in Artificial Intelligence.

- The AI market is predicted to grow from **\$8 billion in 2016 to \$47 billion in 2020** with a 55% realized Compound Annual Growth Rate. This growth includes \$5 billion in software platforms, \$18 billion in software applications, and \$24 billion in services and hardware.
- Machine learning and NLP are **predicted to generate the most revenue at \$3.5 billion and \$1 billion respectively.**

Our 16th Skill Practice Group

Intelligent Automation is Apex's 16th skill practice group and is supported by experts who have hands-on experience implementing complex automated solutions. We've helped clients across the U.S. and Canada shift from older BPM processes to more intelligently designed software Bots. Our expertise spans across multiple industries and technology landscapes. Below are some of the job types and technologies we support within the Intelligent Automation solution space.

Job Types

- Machine Learning Developer
- Computer Vision Engineer
- Speech Recognition Engineer
- Natural Language Processing Engineer
- Biometrics Engineer
- Robotic Process Automation Developer
- Data Scientist
- Big Data Engineer
- Data Analytics SME
- AI Software Engineer
- Algorithm Engineer
- Embedded Engineer
- Hardware Engineer

Skill Areas

- **Speech Recognition:** NICE, Nuance Communications, Verint OpenText
- **Natural Language Generation:** Attivio, Cambridge Semantics, Automated Insights, SAS, Lucidworks
- **Virtual Agents (Bots):** Artificial Solutions, Assist AI, Creative Virtual, Satisfi, Apple, Google, Amazon
- **Deep Learning:** Ersatz Labs, Deep Instinct, Fluid AI, MathWorks, Peltarion, Sentient Technologies
- **Machine Learning:** Amazon, Fractal Analytics, Google, H2O.ai, Skytree, Microsoft, SAS
- **Decision Management:** Advanced Systems Concepts, Informatica, Maana, Pegasystems, UiPath
- **AI Hardware (GPUs):** Alluviate, Cray, Google, IBM, Intel, Nvidia
- **Robotic Process Automation:** Advanced Systems Concepts, Automation Anywhere, Blue Prism, UiPath, WorkFusion
- **Text Analytics and NLP:** Coveo, Expert System, Indico, Knime, Lexalytics, Lingumatics, Mindbreeze, Sinequa, Stratifyd, Synapsify
- **Biometrics:** 3VR, Affectiva, Agnitio, FaceFirst, Sensory, Synqera, Tahzoo

Apex's Intelligent Automation Solution Services

Our account teams understand the unique technical challenges a digital driven world represents and the intricacies involved in designing and implementing a digital enterprise which appropriately uses the power of intelligent automation. We see our customers applying intelligent automation to improve marketing capabilities and optimize operations. Our team of experts has created the right service offerings as part of our suite of Digital Enterprise Solutions.



AI Powered Marketing

How do organizations reach the right customers, cut marketing costs, and increase sales? Organizations of all sizes face these questions every day. In the digital age, there are new challenges:

- *How do they effectively utilize ever evolving artificial intelligence techniques to gain a deeper understanding of their customers' behavior, and, more importantly, transform that knowledge into meaningful relationships which leads to increased ROI?*
- *How do marketing teams maximize their customer interactions based on constantly changing consumer habits?*

Envision a world where AI enables your marketing team to spend more time creating compelling brand experiences and less time deploying and tracking customer interactions.

By converting a static marketing platform into a smart, marketing ecosystem, customers will be able to create their own unique journeys leading to more specific content generation with individualized preferences. Our team of Digital Marketing experts partners with your team to drive the right AI framework for your organization to futureproof in a disruptive digital world.



Virtual Support Operations

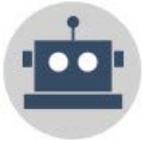
The rise of virtual agents is evident all around us, whether we're checking out at the grocery store through an automated POS kiosk or interacting with help desk chat Bots while online banking. The ability to transfer highly repetitive job tasks to virtual agents brings with it a set of unique opportunities and challenges.

Virtual agents are excellent for handling repetitive transactional queries, including personalized tasks such as; resetting account passwords or accessing an account balance; however, not every customer interaction can be fully automated because of unpredictable human nature. Still, recent studies have shown consumers are often times more satisfied after working through virtual agents than their human counterparts.

Implementing a virtual workforce can be a challenging task without a team of experts to help guide the process. Our workforce management team will assist in developing a strategy which aligns the

client's vision with proven best practices like analyzing business process, business process management, and designing user/caller experiences for speech enabled applications.

- *Whether the client is building a call center of virtual agents or creating fully automated virtual banking solutions, we have the bandwidth to develop the right strategy to propel a virtual support function to new levels of efficiency.*



Robotic Process Automation (RPA)

RPA is a hot topic for forward thinking organizations. Most business leaders are scrambling to separate the hype of its promises from the reality of its capabilities. While RPA is still in its infancy, early implementations of RPA platforms such as; BluePrism, Automation Anywhere, and UiPath have proven valuable in automating repetitive back office operational tasks such as manipulating data, validating forms, performing routine account maintenance, and triggering responses based on user input.

Any general or basic clerical task can be automated through a properly implemented RPA strategy. Apex is a credible player in the RPA space, leveraging partnerships with implementation vendors and 3rd party training companies enabling true BPM transformation of business processes.

- *Our team can audit current BPM strategies, develop project roadmaps, as well as produce future state assessments providing our clients with industry proven methods for true RPA transformation.*



Intelligent Analytics

Analytics have long been used by companies to examine outcomes and help describe what has already happened. The customer has always been a passenger in the vehicle of their own digital experience; however, with the advent of machine learning, deep learning, and predictive analytics, consumers are now sitting in the driver's seat, responsible for creating a unique experience based on their real time interactions with a digital product.

AI within the Data Science field continues to push the limits of what's possible. Organizations are now moving from the diagnostic analytics phase (why did it happen), to the predictive and prescriptive phases to understand what will happen and how can we make it happen.

Apex deploys our digital team to help design and implement robust intelligent analytic strategies.

- *Our team will assist in evaluating current data collection processes, interpretation of customer behavior, measurement and analysis of predictive and prescriptive response methods, mapping data for a Data Management Platform (DMP), as well as dashboard visualization.*

To stay on the forefront of the evolving Intelligent Automation landscape, Apex's team follows trends and engages with subject matter experts within the IA field. Our experience, access to top quality resources, and focus on practical solutions, enables us to support both your current needs and position your organization for long-term success. [Visit our website](#) for more information and to contact your local branch expert to see what we can do for your organization.

What It All Means...

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About Apex Systems

Apex Systems combines with parent company ASGN Incorporated (NYSE: ASGN) to be the 2nd largest IT staffing and services firm in the U.S. Founded in 1995 and headquartered in Glen Allen, Virginia, Apex utilizes specialized technology and industry practice groups to deliver the most talented and qualified technical professionals to clients within all major industries. Apex has a presence in over 60 markets across North America with more than 9,500 contractors currently placed in companies throughout the U.S. and Canada. To learn more, visit www.apexsystems.com.

