

GETTING STARTED WITH AUTOMATION

INRULE



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WELCOME TO THE AGE OF INTELLIGENCE AUTOMATION

Every day, in every corner, artificial intelligence (AI) is transforming businesses and lives. InRule provides a wholistic AI solution, Intelligence Automation. Organizations across industries and time zones rely on our accessible, plain-language platforms to perform a rapidly growing list of vital applications. From loan approvals to inventory forecasting to insurance eligibility to claims processing to cheese manufacturing and beer making, automation is helping businesses run better and individuals enjoy safer, healthier and more-equitable lives.

Read on and explore the power, promise and transformative capability of Intelligence Automation and no-code AI.

PREDICT BETTER. DECIDE BETTER. EXECUTE BETTER.

InRule leads the way in providing human-friendly automation tools. Intelligence Automation platforms empower users individually and ignite change when combined. Our comprehensive solution infuses the true power of AI throughout every aspect of operations.

DECISION AUTOMATION

Operate at the speed of business. Make key determinations instantly, accurately at massive scale and protected from harmful or unintended bias. Our human-centered decision platform and rules engine empower subject matter experts to directly author, test, deploy and maintain complex decision logic without needing code nor assistance from IT. Sample applications include:

- **Mortgage and loan approvals**
- **Insurance eligibility determinations**
- **Credit approvals and limit assignments**
- **Customer loyalty offers**
- **Claims adjustments and processing**

PROCESS AUTOMATION

Retire pen and paper in favor of zeroes and ones. Automate workflows and leverage the power of digital process automation to integrate your existing IT systems and encourage collaboration. Get rid of manual workarounds.

Add decision automation and machine learning on top of automated processes to enjoy the wholistic benefits of intelligence automation featuring:

- **Employee onboarding**
- **Accounts payable and receivable**
- **Inventory management**
- **Shipping logistics**
- **Legal notices and regulatory compliance**

MACHINE LEARNING

See the future through a new and sharper set of eyes. Predictions with The Why® provide actionable insights based on relationship clusters derived from big-data sources. Forestall negative outcomes and convert them to positive ones. Leverage the power of machine learning models for such applications as:

- **Customer churn reduction**
- **Fraud detection**
- **Sale and membership conversions**
- **Criminal risk evaluations**
- **Personalized product recommendations**

Susie goes house shopping...

Susie, a full-time engineer and part-time artist, was itching for more room and wider vistas. Her long-promised raise had come through. After living in her two-bedroom, urban townhome for 12 years, the time was ripe to realize her dream of living in a detached country home where she could fully indulge her passion for landscape painting. Ever the planner, she wanted to pre-qualify for a mortgage. With an exceptional credit score and solid employment history, she knew she would have little trouble finding competitive offers.

After checking real estate listings of properties that fulfilled her wish list, Susie determines she'll need a loan of \$600,000 to cover the purchase and fees. She decides to submit applications to her local credit union as well as a few mortgage lenders she finds on Google. Her application to her credit union is reviewed directly by a loan officer who knows Susie personally. Really wanting to do right by a loyal, long-time customer, he offers his best possible rate terms of 3.25% over prime for 30 years. The large lenders she finds online process her applications with automated decision platforms. Thanks to their scale, speed and numerous loan options, they both come in with slightly better offers, each at 3.23% APR.

A final lender catches her interest, a non-traditional, tech-forward mortgage company. In addition to decision automation used by competitors, their added capability of machine learning as part of the approval process provides a key edge. Their predictive system pinpoints the likelihood of Susie's timely repayment. Automated rules kick in that are set by subject-matter experts willing to undercut the competition if the numbers are favorable. Their system instantly sends Susie a pre-qualified offer for a traditional 30-year mortgage as well as for 20-year and 15-year mortgages, all with significantly lower APRs.

Cut to several months later to find Susie sitting in front of canvas and easel. She paints a pastoral vista of rolling green hills against a cloud-streaked blue sky, the view outside her picturesque country cottage, purchased with a 15-year mortgage at 2.75% APR from the savvy, non-bank lender.





Dale comes up for parole...

After serving 19 years of a 40-year sentence for multiple armed robberies, Dale sits before the state parole board. The three board members consider several factors in determining whether to grant or deny his early release.

They consider his crime and the fact that he was 16 years of age at the time of commission. His mother and sister give impassioned statements in support of parole. His victims give equally passionate statements in opposition. Law enforcement also expresses opposition, which is common. The prison warden is on hand, testifying to Dale's obedience to rules and positive effect on fellow inmates. Finally, they hear from Dale directly. He talks about his crime, his contrition and his plan should he be granted release. He relates earning his GED, learning carpentry skills and completing life-skills and victim-impact classes. The board queries him further about his time while incarcerated and his few rule infractions.

In addition to these traditional means, the members have a new tool at their disposal to help them make their significant determination. A machine learning platform gives a predictive score of recidivism likelihood for every parole petitioner. The system leverages hundreds of inputs determined by university sociologists, legal experts, corrections officials and community representatives. It compares such factors as infractions record, mental-health evaluations, age, education, work skills and family support against nationwide inmate databases. Its scoring outcomes are protected from harmful or unintended biases. And the platform's accuracy has proven significantly above manually calculated scores used previously. Since the board's first use of ML-based risk scoring, recidivism rates have dropped significantly as have prison costs and incarceration rates.

Thanks to his stellar inmate record, earning his high-school equivalency and other educational accomplishments, his young age at the time of his offenses, strong family support and his low risk-score determined by advanced ML, the board votes unanimously to grant Dale early release and a second chance at life. That was five years ago. Today, he leads a lawful, productive life, dutifully fulfilling his parole requirements. Instead of armed robbery, he plies his carpentry skills, running a thriving business as a cabinet maker, successfully transitioning from tax burden to taxpayer.

Carlos searches for a cure...

Steady, determined and resilient, Carlos bears the ideal characteristics of a clinical researcher. He and his colleagues at a midsized pharmaceutical manufacturer understand that the first sign of success in a medication therapy can lead to two-billion dollars or more in investments and at least a ten year wait before gaining FDA approval. And the road is far from smooth, with endless forks and turnoffs, most of which wind up back at 'go.' Only 13 percent of cost-intensive trials prove successful. Still others never find enough qualified participants.

For Carlos, the daunting challenge is even greater as he is chasing a viable treatment for a rare neurological seizure disorder in children. His choice of clinical pursuit was partially due to memories of a childhood friend who had to wear a mini skating helmet when playing. His mother explained the young boy's condition and his need for protection in case he passes out cold onto a hard surface. The indelible memory inspired him to direct his passion for science toward pursuing a career in biochemistry and a job that would allow him to devote his professional life toward helping ensure that one day no boy nor girl would suffer from this debilitating, sometimes terminal condition.

Whatever the affliction, developing an effective treatment and getting it FDA-approved and to market is akin to spinning triple cherries on a slot machine, many times in a row. After finding the desired molecular interaction, lies

the challenge of identifying the patient profile most likely to respond to treatment, after that, it's finding a large enough patient sample to validate results. And finally, after hitting the first clinical triple jackpot comes the challenge of hitting it again and again, without a failure that could set the process back to square one. All of this must happen including the validation of every aspect of the research process along the way.

Fortunately, Carlos has AI on his side. Using proven machine learning, he can comb through vast data sources of previous trials conducted by his lab, university labs and organizations around the world to find the magic molecule which may trigger reactions that could protect or repair a child's neurological short-circuiting. ML will then identify the patient profile most likely to respond to treatment. The system predicts the likelihood of successfully finding a satisfactory number of qualifying participants. And by analyzing global demographic data, it further pinpoints the most likely population centers to find them.

Thanks to the invaluable help of his powerful, automated research assistant, Carlos does indeed find a promising molecular gemstone. ML reveals its best patient matches are afflicted adolescents with a paternal lineage of recessive neurological disfunction that skips multiple generations before appearing. The system predicts a high likelihood of success in finding a statistically significant patient sample and indicates the sprawling populace of southern California as particularly rife with potential candidates.

And off he goes on his quest, traveling as far as his newfound molecule will take him. With the help of ML automation, the journey to pharmacy shelves may be years faster and a third less costly than the hundreds of thousands of such clinical ventures not previously taken.



CHOOSING AN AUTOMATION PARTNER

Maximizing the effectiveness of intelligence automation requires a platform that fulfills organizational wants and meets users right where they are. Does your automation partner offer the capabilities you need and future benefits you desire? Consult the checklist below.



USER ACCESSIBILITY

Does an automation platform require coding skills, and if so, how much? Do its tools work with your current workflows? A code-free platform ensures the greatest adoption among non-technical users and relieves update burdens on IT. Seamless integration with Dynamics 365, Salesforce and other popular platforms will facilitate user adoption.



PREDICTIVE POWER

Will you have machine-learning foresight to see down the road? And if so, how far? Actionable, real-time insights provide invaluable business and operational advantages. Foresee inventory needs, customer desires, fraud likelihood and market shifts, among many other key predictions.



DECISION DRIVE

Decision automation is a core aspect of AI. Your platform must accommodate complex rule logic to drive any purchase, loan or program application, questionnaire or other interaction to completion or referral for human action or exception handling.



PROCESS PERFECTION

To truly realize the full benefits of automation, your system must feature structured process automation to organize, track and optimize human workflows. Additional layers of automation further relieve coworkers from tedious, repetitive, error-prone tasks, making work happy, engaging and focused on people, not processes.



EXPLAINABILITY

Ensuring your outcomes are free from harmful bias requires complete transparency into the factors that led to the result. Explainable AI promotes fairness through awareness.



HUMANS IN THE LOOP

How much control will team specialists exercise over automated processes? To ensure compliance, fair outcomes and other vital objectives, your platform should support intervention at any stage or outcome. Assistance and loan determinations, claim dispensations and every other automated process performed at scale should still remain under vigilant human control.



SAAS POWER AND SECURITY

For the highest security, processing power and least IT hours, there's no place like the cloud. Make sure your precious decision logic, process automations and machine learning algorithms are protected by continuously updated firewalls that powerful, swift SaaS platforms provide. Not to mention, less management demands and security concerns for internal IT staff versus on-premises servers.



TESTING, TESTING, TESTING

Essential practices dictate ensuring that logic and processes function as intended before launching them live. A business rules engine that incorporates testing capability allows users to gauge rule performance and adjust as necessary to achieve optimal outcomes.



WHOLISTIC SOLUTION

To truly enjoy the full benefits of intelligence automation, leverage the combined power of decision automation, process automation and machine learning. InRule offers a holistic, no-code automation solution. Our accessible, completely transparent, scalable tools are available individually or as a seamless, comprehensive solution.

AUTOMATION BEST PRACTICES

Our expertly curated TOP 10 success strategies based on experience gained over two decades and 500 client partners.

1. STATE YOUR PURPOSE AND PRINCIPLES.

The best way to ensure your AI practices align with your mission and tenets is to put them in writing. Clarify the whys, hows and ideal outcomes of your automation implementation. Address concerns head-on. State clearly why you are engaging intelligence automation and paint your ideal vision of how it will impact your organization.

2. KNOW YOUR INFO ARCHITECTURE, ALL OF IT.

Data is the lifeblood of AI. The more quality data available to feed your automation system, the better your results. Unfortunately, the technical infrastructures of many organizations are a phalanx of disconnected systems added piecemeal over time as the company grows and new processing needs arise. Conduct a thorough audit of your IT to ensure no siloed data troves remain untapped.

3. SCRUB AND VERIFY.

Ensure your automation ROI by investing the resources necessary to ensure your raw data is as free as possible from typos, inaccuracies and other corruptions that will negatively impact outcomes. Engage experts to fully understand the quality, scope and limitations of source info.

4. IDENTIFY PRIMARY PAIN POINTS.

Ensure your automation ROI by investing the resources necessary to ensure your raw data is as free as possible from typos, inaccuracies and other corruptions that will negatively impact outcomes. Engage experts to fully understand the quality, scope and limitations of source info.

5. BRAINSTORM MORE USE CASES.

Initial intelligence automation successes will surely leave you hungry for more. Potential applications are infinite and often surprising. Unconventional machine learning use cases include perfecting beer flavors, designing student lessons plans, composing fortune cookies and predicting the size of forest fires. Query team members across departments and functions for processes and interactions that automation can improve.

6. TEST, TEST AND TEST AGAIN.

Before launching automated logic and processes, make sure they function as intended. Conduct thorough testing of each component in isolation and as a whole. Incorporate diverse, representative user groups and needs. Then repeat as dictated by complexity and uncertain variability.

7. BEWARE OF HARMFUL BIAS.

Harmful, misaligned biases can creep into decision logic and machine learning algorithms, often through inadvertent human influences or biased training data. Stay vigilant that your AI stays protected from these negative factors that can adversely affect determinations.

8. KEEP HUMANS IN THE LOOP.

Human referral and intervention are key components of any successful automation deployment and vital to limiting negative biases and outcomes. Human oversight is essential to maintaining compliance in regulated industries such as insurance and financial services. Build human QA and exception handling into customer and applicant interactions to ensure outcomes are free from harmful bias and undesired, disproportionate results.

9. TRACK RESULTS.

Make sure your decision logic, process automations and machine learning predictions are yielding projected outcomes. Track results at every stage of engagement. Consider both quantitative and qualitative metrics such as customer feedback.

10. EVER IMPROVE.

Continue to monitor results and conduct periodic automation audits. Devote the resources, training and collective brainpower and imagination to facilitate better and better performance and ensure your outcomes ongoingly align with your stated objectives. In AI, as in business operations generally, always mind the adage “optimization is a journey, not a destination.”

FAQ

WHAT IS ARTIFICIAL INTELLIGENCE?

AI is powerful software, usually cloud-based, that performs functions involving cognitive, or “intelligent” tasks, such as making specified decisions, forming predictions and completing complex calculations.

WHAT IS THE DIFFERENCE BETWEEN AI AND MACHINE LEARNING (ML)?

While terms are commonly used interchangeably, AI refers to the overall field of automation that includes decision automation and machine learning. ML refers to the subset of AI that involves perhaps its most-familiar function of forming associations and making predictions.

WHAT IS INTELLIGENCE AUTOMATION?

Intelligence Automation is the wholistic InRule automation solution integrating decisioning, explainable AI and digital process automation to infuse algorithmic power up and down organizational operations.

WHY IS AI ALL THE RAGE?

Simply put, AI is the next ground-shifting technology, following in line with the printing press, combustion engine, electrical grid and internet connectivity. Its potential applications across organizational segments are endless. Its overwhelmingly positive influence will make us safer, healthier and treated more equitably.

ARE CODING SKILLS REQUIRED TO USE AUTOMATION TOOLS?

Automation systems are available that require no coding skills. No-code systems, such as the InRule Intelligence Automation Platform, feature plain-language menus and commands. Business users and subject-matter experts can author, test and deploy automated decisioning and processes without requiring coding knowledge or assistance from IT.

WHAT ARE COMMON AUTOMATION APPLICATIONS?

AI assists organizations through a catalogue of tasks growing long and wide. Marketers leverage machine learning to know their changing customer base in

real time, make personalized product recommendations and anticipate churn. Lenders use ML and decisioning to raise mortgage and loan performance while minimizing defaults. Retailers automate inventory management, product returns and fraud detection. Insurers automate coverage eligibility and payouts. Government agencies make eligibility determinations. Drug companies find new indications for existing medications. Human resources onboard new staff. State corrections departments calculate inmate sentences and determine threat risks. Farmers forecast yields and crop costs. Personal-injury attorneys estimate lawsuit values. Primary schools perform student needs assessments. Forensic CPAs search for accounting anomalies. Meteorologists make accurate forecasts (it's true!). And so on.

WHAT IS THE FUTURE OF AUTOMATION?

AI systems will be deployed in an ever-increasing number of applications in fields including healthcare, manufacturing, transportation and education. Automation will take on more and more repetitive, error-prone, dangerous and otherwise undesirable tasks. Predictive systems will help speed vital medications, lower incarceration and recidivism rates, extend access to homeownership, rate athletic prospects, formulate new perfumes, grow tastier potatoes and future applications that will further extend the boundaries of our imagination.

WILL AI REPLACE ME?

Almost certainly not. While job disruptions due to automation will certainly exist, the issue of workforce displacement is both complex and nothing new. A century earlier the machine age ushered in massive shifts from low-paying, dangerous jobs on factory floors to safer, higher-paying jobs in offices. In broad strokes, AI systems tend to excel in repetitive tasks typically associated with drudgery and are still very poor at interpersonal communication, creativity and making complex distinctions. An MIT study on the future of work concludes intelligent automation will ultimately prove a net positive in jobs lost verses created.*

** <https://workofthefuture.mit.edu/research-post/artificial-intelligence-and-the-future-of-work>*

HUMANIZING AI

For over 20 years, InRule Technology has empowered organizations the world over with no-code automation. Leading insurers, manufacturers, health providers, airlines, retailers and government agencies rely on our human-accessible platform for instant, accurate execution of core functions at massive scale. Leveraging automation intelligence, our users predict and decide better, act faster and operate smarter.

GET STARTED

Find out firsthand what intelligence automation can do. [Request a demo](#) or [30-day trial today](#).



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