
Artificial Intelligence

The 3 R's of AI Adoption

Refactor.
Reinvent.
Reimagine.

by Kimberly Nevala

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INTRODUCTION

Artificial Intelligence (AI) is everywhere – or so it seems. Examples of AI's practical potential are rampant and increasing seemingly without bound: the possibilities are equally exciting and overwhelming. Rapidly progressing and increasingly available AI capabilities provide opportunity while the sheer scope of possibility and impact on existing business relationships and practices is intimidating. This can make it difficult to know where to start, especially when our natural inclination is to “go big or go home.” But do you have to upset the proverbial apple cart to even get started with AI? Not necessarily!

Read on to explore three levels at which organizations are adopting AI to drive business forward: refactoring, reinventing and reimagining. The risks and rewards inherent in each as well as the relative impact of AI on existing processes, data and IT practices are examined. While the relative scope of change increases dramatically moving up the chain, each level provides germane opportunities for business improvement and quantifiable business value. In the end, analytically savvy organizations will apply AI across all three vectors. Where you start depends strictly on your organization's goals, analytics maturity and ability to execute.

THE DEVIL IS IN THE DEFINITION

Perceptions of AI vary: from visions of autonomous, independent humanoids to narrow definitions focusing on the ability to automate tasks previously thought to be the sole purview of humans.

Practically speaking there is general agreement that AI solutions (aka: algorithms) are those that are able to learn from, sense and intelligently respond to events (aka: data) in their environment. More specifically, SAS defines AI as the science of training computers to emulate human tasks through learning and automation. With AI machines can learn from experience, adjust to new inputs and accomplish specific tasks without manual intervention.

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The ability to learn from input data without being explicitly programmed (i.e., told the rules in advance) and to interact with other parties (mostly us humans) in a natural and intuitive manner are hallmarks of AI. To that end, a number of technologies underpin AI solutions including machine and deep learning, natural language processing (NLP) and computer vision. Which elements are brought to bear depends on the problem being solved. As does the answer to the questions: "do I need AI?" and "what can AI do for me?"

THREE LEVELS OF AI ADOPTION

While some AI applications are spellbinding in the audacity of their vision and scope most are more mundane, yet no less impactful. As shown in Figure 1, there are three approaches to consider when identifying opportunities for AI.

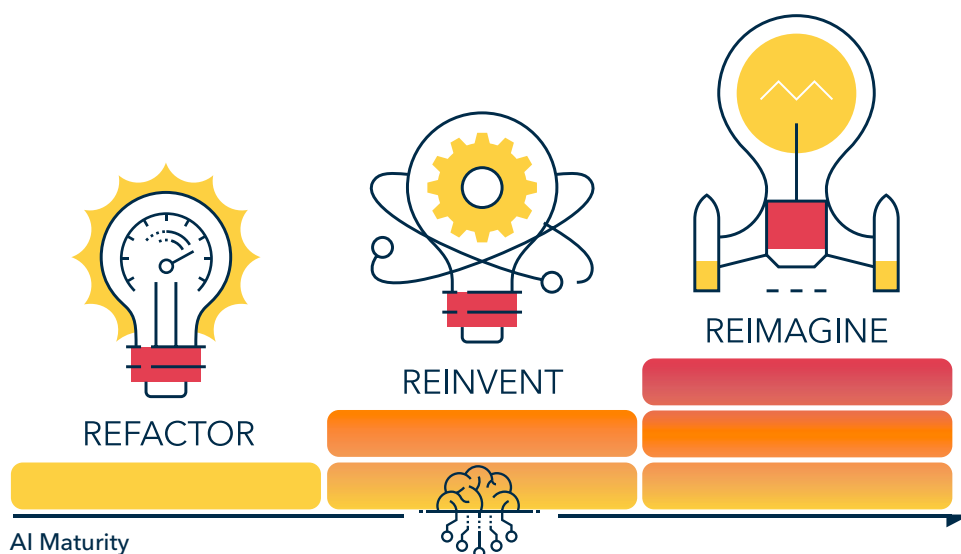


FIGURE 1
The Three Levels
of AI Adoption

REFACTOR - Apply AI to enhance system behavior and performance within the context of existing business processes. Refactoring changes the internals of business processes and systems without affecting their external behavior.

REINVENT - Apply AI to modify how and when processes and services are delivered. Reinvention changes how things work in ways that appear to be different and new.

REIMAGINE - Apply AI to be disruptive. Reimagining changes the playing field entirely: deploying products, services and engagement models never seen before.

ASSESSING IMPACT

Regardless of where you start, implementing AI will require changes to existing business and technical practices. The scope of the change varies drastically as one moves from refactoring existing processes to reimagining net new approaches. When assessing the organization's willingness and ability to implement a proposed AI solution, consider these six dimensions:

- **Business Process** - Extent to which existing product/service offerings, business practices, operating models, employee roles and skills are affected.
- **Analytics Maturity** - Level of analytic maturity, specialized solutions and skills required to execute.
- **Data Enablement** - Sophistication and scope of required data practices from governance to management including considerations for data availability, quality, privacy and usage.
- **DevOps** - Implications for traditional IT practices including standard operating practices for deployment, ongoing monitoring and maintenance of AI algorithms and models.
- **Risk** - Overarching risk inclusive of organization's ability to manage change; political or regulatory exposure; implications for external relationships (customer, partners and so on).
- **Value/ROI** - Value of delivered business outcome and return on investment.

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LEVEL 1: REFACTOR

What It Is

The objective of refactoring is to optimize existing processes: in layman's terms, the intent is to perform existing jobs better and faster. When AI is applied in this context, the external behavior of the process or system is unaffected. To all outward appearances – from the customer's perspective, for example – there is little to no observable difference in how they engage with the organization. Behind the scenes, however, AI may be applied to automate high-volume, repetitive decision points and actions. At this level, AI can also be applied to supercharge existing analytics models through incorporation of previously unexplored data sources or application of new modeling techniques.

Refactoring:

- Focuses primarily on making existing practices more effective and efficient.
- Does not change existing product/service portfolio.
- Improves how but not what or when products and services are delivered.
- Automates rote, high-volume decision points and tasks.
- Delivers incremental improvements.

Using AI to refactor existing practices may seem underwhelming, if not downright anticlimactic, given the public hype around AI's transformative potential. While understandable, organizations early in the AI journey should not shirk from refactoring. Refactoring projects may not be the sexiest on the surface. However, such projects provide a great jump off point to incrementally introduce and hone new skills and analytic methods required for more ambitious applications. Refactoring also provides a great opportunity to prove the value of AI in a business context that is already well understood and where expected outcomes can be clearly measured. This substantially lowers overall risk and barriers to entry.

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What It Takes

Refactoring provides the opportunity for organizations to begin to introduce new analytics and data practices required to support a robust AI practice incrementally.

Business Process



While some routine tasks may be automated and existing analytics given an IQ boost, the overall business process flow and participants are largely unaffected. Parties external to the process (customers, partners, etc.) are unlikely to notice a change in how the organization engages with them. They may notice that services or processes are more efficient.

Analytic / AI Maturity

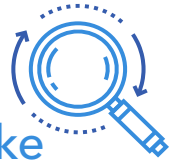


Existing analytics practices are extended by adding one additional element or dimension. For instance, adding text analytics to interrogate written text contained in pre-existing dark (previously unexplored) data sources such as service logs.

Data Practices



May result in acquisition of a single new data source. More often, refactoring projects integrate existing sources in new ways and/or extending data management practices to accommodate previously unmanaged data types such as text.



What It Looks Like



DEFECT DETECTION IN MANUFACTURING

Utilizing text analytics to incorporate text previously held hostage within free form call center notes and service technician logs to enhance predictive models used to detect manufacturing defects early in the production cycle.



SERVICE ROUTING IN INSURANCE

Applying natural language processing and voice analysis to detect stress and customer sentiment in order to appropriately prioritize and route customers calling to report an accident or file a claim.

DevOps



Existing analytics models may be enhanced or replaced with more sophisticated algorithms but not deployed differently. Therefore, overall impact on IT practices created to support more traditional reporting applications and less sophisticated analytics is limited.

Risk



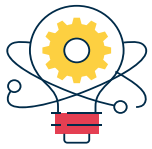
Change management is largely constrained to analytics development and deployment. Automation of rote business activities can result in minor adjustments to internal practices and may disrupt jobs of some low- to medium-skilled resources as discrete activities are offloaded to the AI solution. On balance, external parties including employees and customers are unlikely to notice major changes in the way they work.

Realized Value/ROI



Refactoring provides a path to slowly introduce new technology and build the business case for further investment in broader or more speculative projects. Automation, in particular, delivers cost reductions due to increased operational efficiencies. Refactoring may also impact revenue or satisfaction metrics through improved process effectiveness.

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LEVEL 2: REINVENT

What It Is

Organizations looking to reinvent themselves apply AI to improve how core services and products are created and delivered. Reinvention changes how things work in ways that make the product or service appear to be different and new. At this level, the external behavior of the system/interface is impacted. However, the portfolio of products/services offered remains consistent. Key functions or tasks with a higher level of predictable variability are now offloaded to the AI solution allowing human counterparts to concentrate on higher-value tasks or interactions. At this stage AI begins to play a role as an advisor, augmenting the abilities of human decision makers and workers by providing targeted insights and advice.

Reinvention:

- Shifts focus from automation to include augmentation.
- Integrates AI into existing products and services.
- Changes how and when customers, partners and employees engage.
- Offloads discrete functions and tasks to AI as a visible actor in the process.
- May introduce new revenue opportunities.

It is at this point that the AI solution becomes a visible entity within and outside of the enterprise. Employee roles and responsibilities morph as business processes are functionally reengineered to fully exploit more advanced AI capabilities. Customers and partners may notice that how and when they engage with an organization is changing. As a result, the AI user experience becomes important: relationships, interaction points and handoffs between AI systems and those they interact with must be carefully designed. In addition, organizations must carefully assess both real and perceived risks as parties adjust to a new method of working with each other and the “machine” (aka: the AI solution).

Organizations looking to reinvent themselves apply AI to improve how core services and products are created and delivered.

What It Takes

Business Process



Existing tasks or responsibilities may be executed by AI or processes changed to incorporate improved insights. In both cases, existing human roles are affected requiring either new skills or learning to work side-by-side with the “machine” (so to speak). Business development is also key as how customers and other parties engage with the organization is affected.

Analytic / AI Maturity

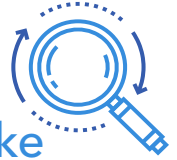


Extending traditional advanced analytics practices with AI capabilities requires acquisition of resources experienced in AI/ML development.

Data Practices



Requires robust production data chains that break down existing barriers imposed by traditional data architectures that strictly delineate operational environments from analytics.



What It Looks Like



CUSTOMER SERVICE IN FINANCIAL SERVICES

Utilizing a chat bot to handle routine customer inquiries and facilitate basic self-service functions like requesting a statement or a new card, resetting a password, transferring money between accounts and so on.



DIFFERENTIAL DIAGNOSIS IN HEALTHCARE

Applying advanced image processing and machine learning to identify potential malignancies on medical images and provide this input to MD for use in diagnosis and treatment planning.

Analyzing data from medical monitors/sensors in real time to identify an emergent infection in an infant in the PICU before clinical symptoms are observed.

DevOps



AI algorithms require continuous monitoring and tuning to ensure business results are delivered, and the solution appropriately responds to behaviors or conditions not originally present. It is at this point that traditional IT delineations between development and operations become fraught. Just as business roles must change, so too shall existing DevOps processes and SLA.

Risk



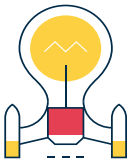
While there isn't a wholesale rethink of what is sold, existing roles must be modified as outward-facing functions migrate to AI and to allow AI to function as an effective collaborator with a human counterpart. If deploying AI in an external facing role – in the case of a chatbot or personal assistant, for example – a keen understanding of how the reactions or expectations of the customer/participant may change when a “machine” is involved is critical.

Realized Value/ROI – Medium



Delivers both cost savings and incremental revenue generation. Increased engagement and retention from your customers/partners or employees can also occur.

A keen understanding of how the reactions or expectations of the customer/participant may change when a “machine” is involved is critical.



LEVEL 3: REIMAGINE

What It Is

Reimagining is the proverbial “greenfield” in which the very nature of the industry, product or service undergoes a wholesale rethink. Undertakings at this level are often heralded as ‘AI-first’ or ‘AI-driven’ undertakings. While this may overstate the case for the sake of marketing and inveigling investment, at this stage AI is an integral part of the delivered product/service. In other words, the product or service couldn’t be delivered without AI. Additionally, business processes and systems are engineered with the AI solution as an active collaborator (actor) in the process.

Reimagining:

- Focuses on rethinking the playing field.
- Introduces new products, services and engagement models.
- AI is integral to product/service design and delivery.
- Introduces new roles and responsibilities.
- Creates new revenue streams.

At this juncture, mindful and seamless integration between human and machine becomes critical. Pre-existing business functions and roles are at a minimum redefined or may become obsolete. Net new jobs are often created as new engagement models are developed. Analytics and data ecosystems are highly mature, and DevOps practices have evolved to support the continuous improvement mindset required to maintain algorithms in the face of continuous environmental change.

Reimagining is the proverbial “greenfield” in which the very nature of the industry, product or service undergoes a wholesale rethink.

What It Takes

At this level, AI's impact is felt on every level.

Business Process



Net new business and engagement models are being defined. Older business models and systems may be retired as new services, products or engagement models are deployed. Acquisition of resources with specialized skills and retraining of existing resources to accommodate new ways of working are commonplace.

Analytic / AI Maturity

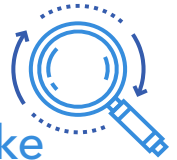


Very sophisticated algorithms are utilized and integrated as fundamental components of operational systems. Automation and augmentation are both prevalent. Multiple AI systems work in concert to support end-to-end business processes within the internal and external business ecosystem.

Data Practices



Requires a high degree of sophistication. At this level, data engineering is fully recognized as a discrete, critical function and data considerations are an inherent component of business process and system design. Because business processes and systems are being invented, requisite data may not be captured by existing processes or is only available to a select few initially.



What It Looks Like



THE SELF-DRIVING CAR

Deploying sophisticated solutions incorporating machine and deep learning, object identification and detection (visual processing) to allow a car to navigate the most optimal route from point A to point B without human intervention.



THE CASHIER-LESS STORE

Using facial recognition, ML and NLP to identify and greet a customer upon entry to the store. Subsequently detect, identify and maintain rolling account of items in the cart and auto-bill customer upon exit. Along the way, remind the shopper of additional items they may be forgetting based on past shopping patterns, season, preferences and current deals.

DevOps



DevOps at this level is very sophisticated. Standard operating practices support a continuous modeling mindset in which algorithmic maintenance and tuning occurs on an as-needed, right-in-time basis. In addition, AI deployment is increasingly modular - creating agility by enabling access and mix-and-match reuse of algorithms to support multiple use cases across platforms.

Risk



New business models are - by definition - speculative. Because these very often challenge long-standing operating models and perceptions, both concrete and perceived risks, including ethical considerations and impact on jobs, are front and center. Existing public policies and regulatory/compliance may not accommodate new modes, requiring substantial partnerships and advocacy to bring the proposed product/service to fruition.

Realized Value/ROI



Creates net new revenue streams. New business models are most likely to increase engagement of existing customer and engage a new cadre of users previously unknown to the organization. While created value may be slightly offset by losses or slowing returns in traditional offerings, the long-term ROI potential is highest at this stage.

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AI ACROSS THE SPECTRUM

Healthcare



Predict Compliance	Incorporate patient sentiment, sociographic and behavioral data into risk profiles to analyze and identify patients likely to be uncompliant with medication or physical therapy prescriptions.
Auto-Coding & Correction	Apply natural language processing and machine learning to identify and correct common diagnostic and billing coding errors or discrepancies based on individual patterns.
Other	Surgical/Medical Unit Optimization; Patient Flow Forecasting; Medical Fraud Detection (prescriber; provider; patient); Population Health Monitoring; Provider Quality Analysis



Predict Patient Prognosis	Utilize deep learning to predict patient prognosis based on comprehensive analysis of published research, clinical, claims, and environmental factors.
Drug Discovery	Identify potentially efficacious drugs based on analysis of genome and protein structures coupled with identification and analysis of clinical data and outcomes for "like" illnesses.
Other	Disease Detection; Differential Diagnosis; Trial Design & Optimization; Bio-Surveillance: Detect & Preempt Disease Outbreaks; Supply Chain Optimization



The Connected Patient	Utilize data from wearables to identify motor-disease based on a patient's pattern of movement or sensory data. Apply same information to monitor disease progression, measure the progress of rehabilitation or to manage pain in real time based on collected data, not subjective patient reporting.
Precision Medicine	Determine optimal diet, medication or treatment based on evaluation of a patient's genetic profile, microbiome, clinical and behavioral records. Analyze discrete morphological and molecular changes to monitor and optimize targeted interventions for each patient.
Other	Virtual Personal Medical Assistant, Artificial Limb Animation; Robotic Surgery

Manufacturing



Defect Detection	Apply image processing and analytics to streaming image data to identify defects in silicon wafers invisible to the human eye and flag for operator to remove before the product leaves the production line.
Self-learning Robots	Apply visual image processing and ML to allow production robots to learn and optimize a discrete function such as spot welding without human invention.
Other	Quality Assurance and Control; Production Optimization; Self/ Spatially Aware Robots



Predictive Maintenance	Predict when a product such as a wind turbine or engine will fail or malfunction based not just on engineering specifications and average historical performance data but operating history, current performance and environmental conditions for the specific device. Alert to enable corrective action just in time, before outage or critical failure occurs.
Fleet Optimization	Incorporate real-time traffic, weather and other operating data to optimize delivery times and minimize fuel consumption in real time. Incorporate ongoing learnings into future planning to optimize fleet configuration and personnel.
Other	VR-Enabled Service; Collaborative Robotics; Asset Performance Optimization; Predictive Inventory Management



Smart Factory	Systematically identify and remove defective materials and adjust operating parameters to resolve errors, optimize asset performance and maximize throughput. Automatically and continuously adapt manufacturing output in response to fluctuations in supply chains, distribution networks and consumer demand.
Product Design/ Engineering	Apply reinforcement learning to design product based on specified goals and objectives, analysis of known engineering and science principles, prior product specifications, known design patterns and so on. Discuss constraints and iterate with human designer.
Other	Self-Driving Vehicles; Smart Products (IOT-enabled); Mass Customization

Banking/Insurance

**Robotic Process Automation (RPA)**

Utilize AI to automate repetitive tasks such as authenticating and correcting errors in fund transfer requests, reconciling failed trades, and responding to routine data requests.

AML/Fraud Detection

Apply semi-supervised and unsupervised machine learning techniques to detect potential fraud through analysis of known patterns and detection of new anomalous transaction or network patterns by and between individual parties/entities.

Other

Cybersecurity and Network Intrusion Detection; Biometric Identify Verification (facial recognition); Stress Testing; Document Classification and Analysis

**Virtual Customer Service Agent**

Utilize natural language processing and ML to understand a written or spoken request, take appropriate action or provide requested information to customer in their native tongue. Reroute non-standard inquiries or disaffected customers with contact notes to human agent for follow-up.

Automated Claim Resolution

Apply natural language processing and machine learning to determine probable resolution and cost of new claim based on client's policy, profile, claimant behavior and claim history. Authorize repair or replacement for low-value or low-risk claims automatically, route complicated and potentially fraudulent transactions to human agents/investigators.

Other

Predictive Default Detection; Predictive Client Outreach/Financial Health Monitoring; Distracted Driver Detection and Alerts

**Investment Optimization**

Continuously identify potential assets and execute investment recommendations (i.e. buy stock, adjust distributions) based on individual financial goals, principles (e.g. ecofriendly, charitable) and ongoing evaluation of emerging business news, corporate reports/prospectus, global and local consumer, geosocial and political trends.

Adaptive Portfolio/Wealth Management

Utilize AI to monitor, adjust and optimize a customer's financial portfolio across asset /account types and service providers (e.g. bank, investments and insurance) based on evolving needs and goals determined not just by stated objectives but detection of major life events, current behaviors, market and consumer signals.

Retail

**Customer Service Optimization**

Apply natural language processing and ML to analyze the content and tone (i.e. sentiment) of a customer calling or writing into a contact center or posting on social media to inform appropriate outreach and identify emerging problem areas and consumer trends sooner.

Product Content Management

Apply image processing and text analytics to identify, categorize and relate information from product images, specifications, consumer commentary to properly identify, catalogue and cross-reference content (i.e. identify "like" styles).

**Virtual Concierge**

Utilize natural language processing to enable a virtual concierge to engage a customer in series of contextual questions (in writing or verbally). Recommend the appropriate product or service by taking into account individual answers and consumer trends, buying behaviors and preferences of like customers.

Contextual Marketing/Hyper-personalization

Utilize machine learning to integrate, analyze and recommend products/services based on individual profile, buying history, current location and activity. Automatically engage customer through appropriate channel using natural language interfaces and/or traditional outreach mechanisms.

Other

Dynamic Pricing; Smart Service Routing; Inventory Optimization; Supply Chain Optimization

**Personal Shopper**

Deploy a virtual personal shopper to identify clothing needs based on inventory and visual assessment of current wardrobe (styles, colors), event calendars, season, historical buying patterns and/or explicit requests. Identify likely designers/designs, present individual mockups, shop for best outlet - retail or bespoke and execute purchase automatically or upon approval.

Supply Chain Optimization

Predict short-term or real-time forecasts for demand based on evaluation of sales, market product trends, current economic and geopolitical climates, consumer sentiment and interest as expressed on social networks and so on. Automatically adjust procurement, sales, pricing and fulfillment models accordingly.

Other

Cashier-Less Store; Predictive Fulfillment; Personal Product Design

Energy/Utilities


**Content
Classification &
Analysis**

Apply natural language and image processing to identify and catalogue disparate documents (contracts, land deeds, regulatory policies, asset specifications, etc.). Perform contextual analysis to identify and highlight key terms, sentiment (if applicable), and requirements within and between different policies, contracts and specifications for action by human knowledge worker.

Energy Forecasting

Apply deep learning to optimize energy consumption forecasts by accounting for both short- and long-term variabilities in operating conditions and resultant long-term dependencies.

Other

Outage Prediction & Detection; Cybersecurity; Disaster Monitoring & Response


**Connected Home
[smart thermostat]**

Analyze environment-specific usage patterns and preferences to optimize comfort while minimizing usage and cost. Detect and adjust heating and cooling based on factors such as the number of people and level of activity present.

**Consumption
Management**

Optimize HVAC and related control systems in data centers against acceptable operating parameters, variable and hard-to-predict environmental factors and demand conditions, in real time.

Other

Asset Performance Management; Smart Meters; Portfolio Optimization; Customer Personalization/Target Marketing


The Smart Grid

Deploy integrated AI solutions to seamlessly and autonomously adjust energy generation and delivery between disparate producers, energy sources, and consumers to maximize use of renewable or low-cost energy sources, optimize energy mix, and avoid outages.

Other Cool Applications

**Executive Assistant**

Employ a virtual executive assistant to answer rote emails and inquiries using your personal tone of voice. May also automate basic workflows (prioritizing emails, accepting calendar invites or approving time off and expenses) and collate information required for key decisions or meetings in an integrated format with initial analysis to improve response time.

**Virtual Paralegal**

Apply machine learning and natural language processing to perform legal research or evaluate contracts by identifying, collating and analyzing relevant content including applicable laws, regulations, case law, precedents, as well as public opinion and sentiment via social media and news publications.

Sports Performance Optimization

Utilize image processing, object detection and deep learning to track the identify and movement of all the soccer players on a field to inform coaching and game day strategies, identify highly-performing and high-potential players (and vice versa) and optimize overall team performance across diverse playing conditions and scenarios.

**Non-Invasive Wildlife Conservation**

Identify and track endangered species in remote and inaccessible areas on an ongoing basis by applying image processing to the footprints they leave behind. Utilize ML to analyze and predict population health, stability and emerging threats or needs for investigation.

Smart City

Apply data from sensors, imaging, social media to adjust traffic patterns, street lighting, parking, and optimize deployment of services such as transportation, waste management, police or public health in real time. Also used to improve forecasting, planning and budgeting for critical public resources.

CLIMBING THE AI LADDER

Is This *Really* New?

You likely noticed that many of the applications showcased above are not net new. Personalized marketing, for example, has been near and dear to retailer's hearts for decades. Literally, decades. During which time, progressively maturing analytic capabilities have played an increasingly important role in realizing the goal of true personalization.

So what makes AI different? First, the way AI algorithms are developed (i.e., learn) as well as the diversity (video, images, text, IOT) and volume of input they can ingest has vastly changed and improved. Beyond this, there are two key determinants for what tends to be publically* recognized as AI. These two AI hallmarks are the ability to:

- Deploy the system to sense-and-respond to events in a contextually appropriate way IRL (in real life). Which doesn't always, but very often, translates to real-time operation.
- Interact with the system using natural language - interpreting, speaking and writing in "plain English" (or your primary language du jour).

The questions that AI answer are not fundamentally different than previous generations of analytic solutions: what happened, why, what will happen next, what should we do about it? Rather, AI provides a mechanism to improve and extend the scope, effectiveness and usability of previous analytics applications. This, in turn, creates opportunities for new engagement and business models.

That said, while it's important to have clarity about the term AI, it is more critical to have clarity about the problem being solved or objective at hand. Despite its emergence on marketing pages everywhere, not every problem requires AI. Nor can AI solve any problem.

AI provides a mechanism to improve and extend the scope, effectiveness and usability of previous analytics applications.

* As opposed to more formal, perhaps rigorous, and philosophical arguments about the nature of intelligence by academics, researchers and other curious sorts like I.

The Power of the Collective

It is also noteworthy that the most complicated and immersive AI solutions are made up of a network of smaller solutions working in concert. Comprehensive AI environments function much like an orchestra in which individual players contribute uniquely and vitally to the outcome of the whole. The result of which, is of course, more complicated and awe-inspiring (or, at a minimum, louder) than any individual could achieve alone. To that end, solving extremely complex problems with AI starts by identifying a series of discrete decision points or actions. Followed by integrating those solutions into an ensemble. This is an important point because it illuminates a path forward for organizations that do not yet have the analytic, data and organizational willpower or experience to deploy AI pervasively.

Where Will You Begin?

Contrary to often sensationalized accounts touted on the evening news, AI - like other game-changing technologies before it - can be applied to your business in big and small ways. To remain competitive, the ability to apply AI to refactor and reinvent core business practices may be a de facto requirement in the near future. For the time being, reimagining, while the most tantalizing, will likely remain the exclusive domain of innovative upstarts, organizations that are "born digital" and particularly forward thinking organizations with the money, talent and willpower to fundamentally rethink how the world works.

Regardless, there is value to be had. It's certainly tempting to run straight for that greenfield and reimagine a different future for your business. However, this will be an exercise in frustration if the organization does not have the analytic and data muscle, along with both the willingness and ability to make broad changes to existing business practices. Don't despair if initial projects feel too tactical or operational. Significant value can be created by refactoring existing practices. Most importantly, such early-stage projects provide fertile ground upon which to incrementally develop the diverse business, data science, analytics, engineering and change management skills required to successfully deploy AI while delivering incremental value along the way.

Where will you begin?

AI - like other game changing technologies before it - can be applied to your business in big and small ways.



About the Author



KIMBERLY NEVALA is the Director of Business Strategies for SAS Best Practices. She is responsible for market analysis, industry education, emerging best practices and strategies in the areas of advanced analytics, information governance and data-driven culture. Kimberly's current focus is helping clients understand the business potential as well as the practical implications and limitations of artificial intelligence and machine learning.

A popular speaker and author, Kimberly has published numerous e-books and white papers including: *Rationalizing Risk in AI*, *Making Sense of AI*, *The Machine Learning Primer*, *Portrait of a CAO*, *The Anatomy of an Analytic Enterprise*, *Sustainable Data Governance* and *Top 10 Mistakes to Avoid When Launching A Data Governance Program*.

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