

Mortgage Servicing

From A to...I?



BY JOHNNY DALE FREVERT, JR., ESQ.
ASSOCIATE ATTORNEY
KLUEVER LAW GROUP, LLC
JFREVERT@KLUEVERLAWGROUP.COM



ARTIFICIAL INTELLIGENCE,

or AI for short, is here to stay. To what extent AI becomes incorporated into everyday life is sure to be the subject of debate, a cause for handwringing, and a boon for Hollywood writers' rooms in the years to come. The objective of this article is to consider the impact AI and ML have made on mortgage servicing and the wider financial industry to date.

From A to...I

AUTOMATION:

Generating automated documents is nothing new to the mortgage servicing industry—Fannie Mae and Freddie Mac have employed automated underwriting programs for several years—but this software is only as good as the information it's provided¹.

BIAS:

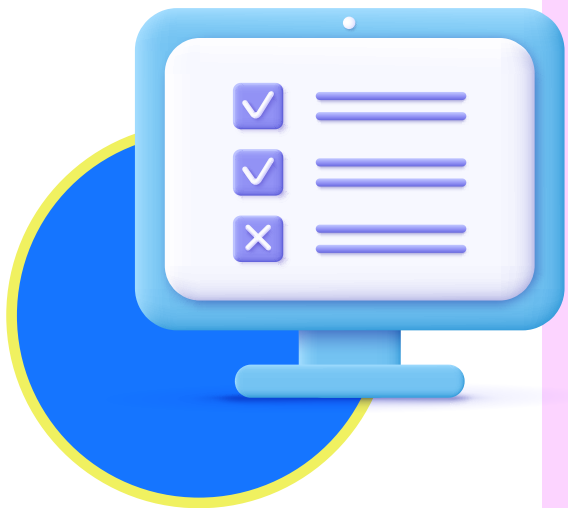
Algorithmic underwriting, or the use of AI to review loan applications and make credit decisions², could conceptually be less subjective and less prone to human biases. However, if the data that the machine is training is subject to conscious or unconscious bias, algorithmic underwriting could have the effect of perpetuating, not eliminating, historical biases in lending.

¹ Maryalene LaPonsie and Chris Jennings, *How AI Is Influencing The Mortgage Industry*, December 18, 2023, <https://forbes.com/advisor/mortgages/how-ai-affects-mortgage-industry>

² Alec Hanson, *The Future Of Mortgage Lending: How AI And Humans Can Coexist*, March 9, 2023, <https://www.forbes.com/sites/forbesfinancouncil/2023/03/09/the-future-of-mortgage-lending-how-ai-and-humans-can-coexist>



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CHATBOTS:

Love 'em or hate 'em, Chatbots are becoming ever ubiquitous across all sectors, and the mortgage servicing industry is no exception. The reasons to love them (billions of dollars in annual savings vs. their human counterparts³) and hate them (the dreaded “doom loop”⁴) are equally obvious. The Consumer Financial Protection Bureau (CFPB) conducted research and found that Chatbots, while certainly cost-effective when it came to addressing straightforward consumer inquiries, could offer a poor return on investment if they were not capable of being compliant with federal law or simply provided poor customer service.

DOCUMENT PROCESSING:

The effectiveness of the mortgage servicing industry is highly dependent upon how fast documents can be received, processed, analyzed, and decisioned. By using Intelligent Document Processing, for example, simple but essential data entry can be done in a fraction of the time it would take for a human to do the same task⁵. For lenders and servicers, this quicker verification of customer data means faster decisions.

EMPLOYEE CONCERNS:

Naturally, as with any leap forward in technology, there are going to be concerns about job displacement. AI is no different in that regard. Tech companies are proposing a lift from AI for the menial aspects of an employee's day--a Chatbot to handle incoming instant messaging or to respond to emails⁶, for example. It is inescapable, however, that some jobs are going to be at risk for AI automation—perhaps as high as 18% globally⁷. However, in a recent survey of the mortgage industry, though streamlining operations was the primary motivation behind the adoption of AI (73%), a preference for person-to-person interaction remains⁸.

FANNIE MAE SURVEY:

Fannie Mae surveyed the mortgage industry about AI in August 2018 and recently revisited their questions in an August 2023 follow-up. While the results suggested a growing familiarity with AI and a willingness to adopt or investigate the adoption of AI, cost

3 Consumer Financial Protection Bureau, *Chatbots in consumer finance*, June 6, 2023, para. 14, <https://www.consumerfinance.gov/data-research/research-reports/chatbots-in-consumer-finance>
4 *Id.* at para. 33.

5 Pankaj Tripathi, *Overview of Intelligent Document Processing (IDP) and its Benefits*, December 8, 2023, <https://www.docsumo.com/blog/intelligent-document-processing>

6 Samantha Murphy Kelly, *The way we work is about to change*, March 19, 2023, <https://www.cnn.com/2023/03/19/tech/ai-change-how-we-work/index.html>

7 Michelle Toh, *300 million jobs could be affected by latest wave of AI, says Goldman Sachs*, March 29, 2023, <https://www.cnn.com/2023/03/29/tech/chatgpt-ai-automation-jobs-impact-intl-hnk/index.html>

8 Peter Ghavami, *Mortgage Lenders Cite Operational Efficiency as Primary Motivation for AI Adoption*, October 4, 2023, <https://www.fanniemae.com/research-and-insights/perspectives/lenders-motivation-ai-adoption>

and the complexity involved with the integration of AI remain persistent barriers⁹.

GOVERNMENTAL REGULATION AND ADOPTION:

Proposed rulemaking to increase the accuracy and fairness of AI or automated home appraisals¹⁰ and the interpretation and application of existing laws in the AI space is to be expected. However, as 80 percent of mortgages are federally backed by government-sponsored enterprises (GSEs), their actions move the market¹¹. Therefore, if AI is to be widely put into use in the mortgage servicing space, the GSEs need to lead the way.

HALLUCINATION:

One of the biggest fears of consumers, and biggest risks to the financial industry, is misinformation¹². Hallucination concerning AI is the tendency for chatbots, like ChatGPT, to invent information¹³. Because they learn by analyzing data and identifying patterns (and then making decisions based on the recurrence of those patterns), hallucinations cannot be eliminated.

IMPERSONATION:

Considering that some of the biggest concerns slowing the implementation of AI in the mortgage industry surround the security of data, what happens when bad actors can supercharge their scams with AI? Beyond the ability of AI to generate ever more convincing phishing emails, there are now publicly available programs that can spoof someone's voice based on as little as 10 seconds of their speech, leading some to wonder if you can even trust (or leave) a voicemail¹⁴.

In conclusion, while the mortgage servicing industry can certainly derive tangible operational and economic benefits from the strategic implementation of AI, it must balance those benefits against very real concerns. **W**



9 Fannie Mae Economic & Strategic Research Group, *Mortgage Lender Sentiment Survey Special Topics Report*, October 2023, <https://www.fanniemae.com/media/49231/display>

10 Rohit Chopra, *Algorithms, artificial intelligence, and fairness in home appraisals*, June 1, 2023, <https://www.consumerfinance.gov/about-us/blog/algorithms-artificial-intelligence-fairness-in-home-appraisals/>

11 Michael Neal and Matthew Pruitt, *Harnessing Artificial Intelligence for Equity in Mortgage Finance*, November 2023, p. 36, <https://www.urban.org/sites/default/files/2023-11/Harnessing%20Artificial%20Intelligence%20for%20Equity%20in%20Mortgage%20Finance.pdf>

12 Maryalene LaPonsie and Chris Jennings, *How AI Is Influencing The Mortgage Industry*, December 18, 2023, <https://forbes.com/advisor/mortgages/how-ai-affects-mortgage-industry>

13 Cade Metz, *Chatbots May 'Hallucinate' More Often Than Many Realize*, November 16, 2023, <https://www.nytimes.com/2023/11/06/technology/chatbots-hallucination-rates.html>

14 Sarah Wheeler, *How scammers are using AI to commit new fraud in real estate*, December 7, 2023, <https://www.housingwire.com/articles/how-scammers-are-using-ai-to-commit-new-fraud-in-real-estate/>

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ROBOTIC PROCESS
AUTOMATION (RPA)





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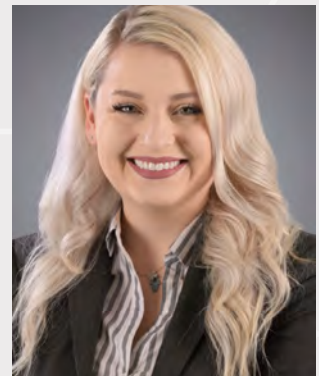
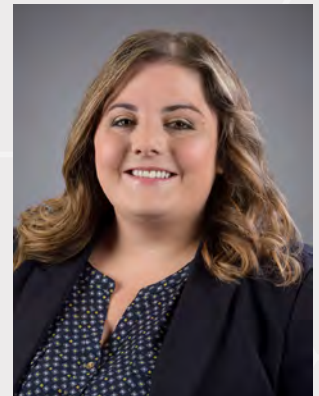
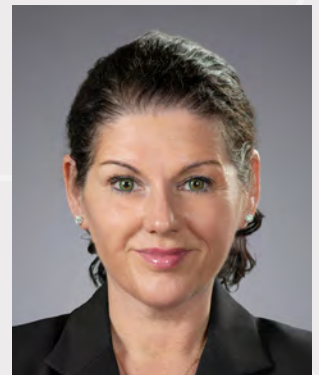
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Letter from the Editor

ARTIFICIAL INTELLIGENCE (AI), Augmented Reality (AR), Virtual Reality (VR) and Robotic Process Automation (RPA). These concepts (and their acronyms) foretell a new and exciting future. Our industry is just beginning to navigate the maze these new opportunities offer. At the WILL conference last year, I remember some of my peers mentioning how they were using ChatGPT to assist in writing some material for policies being drafted at the office...or more often, as guidance for writing thank-you notes, follow-up letters, or even company policies. AI and its counterparts provide us with tools for improving workflows, finding efficiencies, and best of all, saving time and money. Each venture must be undertaken with great care of the impact on your people, so as not to undermine the contributions of the human factor involved in the process. Users of these technologies need to ensure unconscious bias does not accidentally factor into the process.

The writers in this latest issue represent some of the best minds in our industry from firms, servicers, and vendors, who took the time to research this new technology and share their insights, advice, and guidance. Zachary Glaser in *VR, AR and AI in a Real Law Firm* defines VR, AR and AI and explains their possible uses in law firms. Johnny Dale Frevert, Jr. in *Mortgage Servicing: From A to ...I?* highlights many of the impacts AI has made on mortgage servicing and the wider financial industry to date. In *Robotic Process Automation: Empowering Your Team to Tackle More Complex Challenges*, Jamin Vogel and I provide an in-depth view of RPA, its possibilities, challenges, and considerations. Jan Duke helps to ensure we all set good policies in *Tips for Creating an AI and RPA Policy for Your Company*.

Regina Slowey and Cheryl Cook show us the many ways in which these technologies are already making a great impact in our lives in the articles: *Microsoft's Copilot: Your AI Sidekick*; *AI Unleashed: Transforming Everyday Life from Home to Health*; and *Artificial Intelligence Assistance for Low-Vision/Blind: Are We There Yet?*



On a Personal Note: Our Complicated Relationships with Artificial Intelligence, Annalise Hayes DeLuca takes a fascinating look at interpersonal connections with AI. Finally, taking a look at the positive and negative impacts, Stacie Thomas Rankey offers, *The Good the Bad & the Future: The Impact of AI on the Industry* and Catherine Di Lorenzo writes about the *Dark and Light of AI*.

Ending our issue on a tasty note, *What's Your Passion – Cooking Is Love*, contributed by a new writer, Jennie Isom. Jennie shares her joy of Italian cooking – Manga! I hope you all learn as much as I did from this incredible issue on AI and begin looking at new ways to bring this technology into your life, home, and work. May 2024 be our industry's best year yet! **W**

Michele Lublin

MICHELE LUBLIN
Director of Finance & Operations
Rubin Lubin, LLC
mlublin@rlselaw.com



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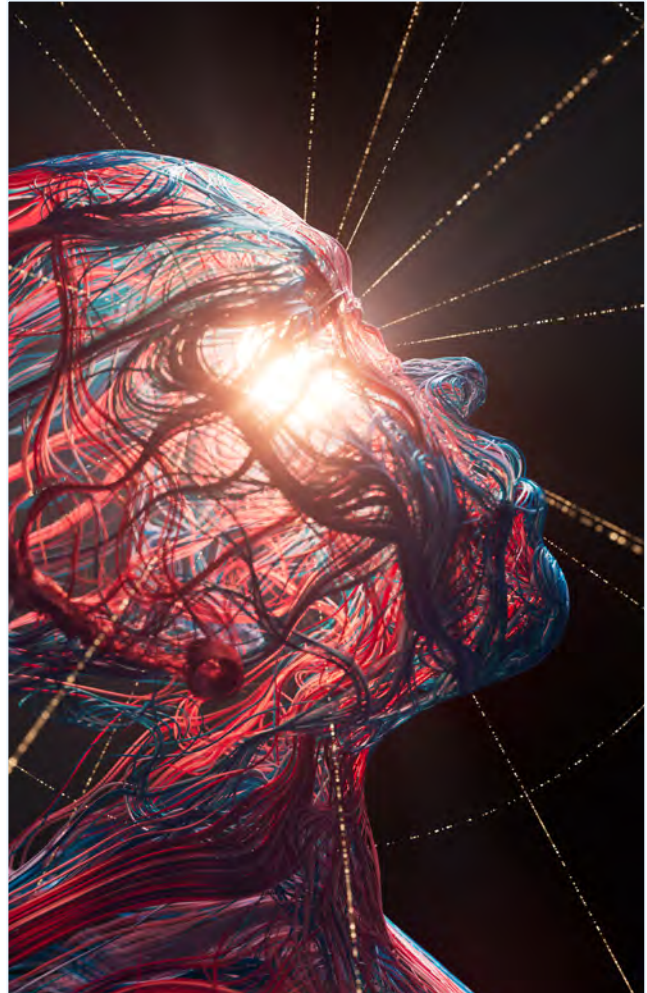
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VIRTUAL REALITY, AUGMENTED REALITY, AND ARTIFICIAL INTELLIGENCE IN A REAL LAW FIRM



BY ZACHARY T. GLASER, ESQ.
LEGAL TECH ADVISOR
AFFINITY CONSULTING GROUP
ZACK@LAWYERIST.COM



VIRTUAL REALITY (VR), Augmented Reality (AR), and Artificial Intelligence (AI) are more accessible than ever. Their increasing commercial viability will fuel that trend into the foreseeable future. Clients, courts, businesses, opposing counsel, and the rest of the world are embracing both the benefits and the detriments of these technologies. Like it or not, lawyers and law firms need to understand them.

But what are VR, AR, and AI, other than LinkedIn buzzwords, and how should law firms use them? The short answer: they are tools. And unless one employs them to make the firm's life easier, they are just shiny objects that tend toward distraction, at best, and censure for the lazy, at worst.

These tools, though, can increase a firm's efficiency, productivity, and accuracy by orders of magnitude. Firms can advise their clients better, assist them more quickly, or even provide services previously unavailable or financially unfeasible.

Let's take a basic look at these three emerging trends and see what they are, how they are currently used, and what pitfalls we may need to watch out for.

VIRTUAL REALITY

Virtual Reality, according to *The WIRED Guide to Virtual Reality* is, "a technology by which computer-aided stimuli create the immersive illusion of being somewhere else..."¹ Frankly, that is about as good a definition as anything else. These immersive experi-

ences can come in the form of special rooms with large screens (i.e., flight simulators), or the more common head-mounted displays of VR headsets.² They can incorporate audio stimuli, body and eye movement tracking, and even haptic feedback.³ Some of the more advanced VR gaming systems even use a treadmill to simulate walking or running in the virtual world.⁴

The key factor, however, is the illusion of being somewhere else, no matter the depth of the experience. VR attempts to take a user to another location altogether. It can be used in evidentiary proceedings to provide a reasonable representation of actions, locations, or specific scenarios. Or it can be a place where clients meet with your firm, avatar-face to avatar-face.

AUGMENTED REALITY

Augmented Reality, on the other hand, is not immersive. It is additive or destructive, depending on the goals. It combines real-world and computer-generated content to enhance a user's perception of the physical

1 Rubin, P., & Grey, J. (2020b, March 8). What is Virtual Reality (VR)? The Complete WIRED Guide. WIRED. <https://www.wired.com/story/wired-guide-to-virtual-reality/>

2 Wikipedia contributors. (2001, October 3). *Virtual reality*. Wikipedia. https://en.wikipedia.org/wiki/Virtual_reality

3 Id.

4 Fisher, T. (2021, February 28). What is virtual reality? Lifewire. <https://www.lifewire.com/virtual-reality-vr-definition-4155090>



space around them.⁵ Instead of creating a virtual environment out of whole cloth, AR systems must map and track a physical environment while simultaneously displaying and tracking a companion virtual environment. It is not enough to simply display something to a viewer (i.e., running pace, or other information from a smartwatch). The virtual environment must be incorporated into the user's perception of the physical world (i.e., ghost pacer leading a runner through their route).

AR requires the ingestion of data that many people would consider personal or private. An app that shows a user what a specific couch would look like in their living room will need a lot of information about the user's house. Even a product as simple as a filter that places a bird on a user's shoulder will have to gather information about its subject.

ARTIFICIAL INTELLIGENCE

Artificial Intelligence is the most complex of these three technologies. It is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.⁶ AI cases and technologies vary from software that can defeat the world's best chess players⁷ to predictive text in iMessages.⁸ One can even use AI to create remarkable headshots with products like Fotor and Aragon.ai. Mostly, though, AI is used for much less glamorous tasks like background noise reduction or detecting fraudulent transactions.

For now, at least, these tools need to be built for purpose. So-called Artificial General Intelligence (AGI) is still hypothetical.⁹ Although ChatGPT seems to know everything, it most certainly does not. And when attorneys use AI tools for purposes beyond their capabilities, they can get into trouble.¹⁰

This is because, at its core, the output of Artificial Intelligence is simply based on probabilities, which can be good or bad, depending on the purpose. If doctors use AI to flag items for review, it can increase efficacy. If courts use AI to determine the potential for recidivism, it can magnify bias¹¹.

However, to get these probabilities to something even remotely help-

5 Wikipedia contributors. (2024, January 2). Augmented reality. Wikipedia. https://en.wikipedia.org/wiki/Augmented_reality

6 Copeland, B. (2024, January 4). Artificial intelligence (AI) | Definition, Examples, Types, Applications, Companies, & Facts. Encyclopedia Britannica. <https://www.britannica.com/technology/artificial-intelligence>

7 Wikipedia contributors. (2024a, January 1). Deep Blue versus Garry Kasparov. Wikipedia. https://en.wikipedia.org/wiki/Deep_Blue_versus_Garry_Kasparov

8 Johnson, K. (2023, September 13). The iPhone 15 opts for intuitive AI, not generative AI. WIRED. <https://www.wired.com/story/apple-iphone-15-opts-for-intuitive-ai-not-generative-ai/>

9 https://en.wikipedia.org/wiki/Artificial_general_intelligence

10 Patrice, J., (2023, May 30). For the love of all that is holy, stop blaming ChatGPT for this bad brief. Above the Law. <https://abovethelaw.com/2023/05/chatgpt-bad-lawyering/>

11 Fry, H. (2018). *Hello World: Being Human in the Age of Algorithms*. W.W Norton & Company, Inc.



ful, AI tools need to process a fantastic amount of data. If a judge has only ruled twice on a particular issue, even a well-trained AI tool will be hard-pressed to predict the outcome of a third case with any accuracy. On the other hand, with decades of feedback from ReCAPTCHA users, Google has trained AI to digitize millions of books and print articles.¹²

Even built-for-purpose AI has its problems, though, especially when users rely on it to make a specific decision. When outcomes are based on massive amounts of data and years of feedback, it is hard to articulate how the tool came to that decision. This can make it next to impossible to check its accuracy. As such, regulators increasingly focus on these so-called black boxes and a user's ability to explain why a tool came to a particular decision.¹³

Since AI models require unprecedented amounts of data, these tools are often trained on information protected by copyright. Commonly, they “create” output that looks remarkably like the products they are trained on. A Fair Use war is already being waged in the courts by writers, visual artists, musicians, stock photo providers, and other publishers against the likes of OpenAI and Meta.¹⁴

Users should know how the AI tool works, even if it's built for purpose. For lawyers and law firms, the specific danger is confidentiality and privilege. If a lawyer trains an AI tool on client data, they must confirm the data does not make its way into a third party's hands. This includes information provided via a chatbot's prompt and any files the lawyer loads into the tool.

A law firm should not avoid AI outright, though. There are plenty of tasks that have built-for-purpose tools waiting to increase a firm's efficiency or accuracy. And, as firms look to direct the power of AI to their data, the above concerns can be mitigated and avoided through careful consideration. Providers like NetDocuments and CoCounsel have already addressed these concerns with some of their tools. And the firm's IT department should be able to ask the right questions—provided they are considering the appropriate dangers.

IMPLEMENTING AR, VR, AND AI IN A FIRM

Ultimately, AR, VR, and AI are simply tools a law firm can use to assist its broader purpose of serving clients. It's easy to look at these technologies and create purposes for them in the office, which can easily create more work for the firm. As with all technology implementation, the challenge is using these tools to enhance existing processes. Remember, if your office doesn't need Virtual Reality, it would be ill-advised to buy headsets for all the associates. It may be fun, but it probably won't increase productivity, or lead to more billable hours. **W**

12 O'Malley, J. (2018, January 12). Captcha if you can: how you've been training AI for years without realizing it. TechRadar. <https://www.techradar.com/news/captcha-if-you-can-how-youve-been-training-ai-for-years-without-realising-it>

13 Consumer Financial Protection Bureau. (2022, May 26). *Adverse action notification requirements in connection with credit decisions based on complex algorithms*. https://files.consumerfinance.gov/f/documents/cfpb_2022-03_circular_2022-05.pdf

14 Appel, G. (2023, April 11). Generative AI has an intellectual property problem. Harvard Business Review. <https://hbr.org/2023/04/generative-ai-has-an-intellectual-property-problem>



ROBOTIC PROCESS AUTOMATION

EMPOWERING YOUR TEAM TO TACKLE MORE COMPLEX CHALLENGES



BY JAMIN VOGEL, FORECLOSURE MANAGER, JVOGEL@RLSELAW.COM AND
MICHELE LUBLIN, DIRECTOR OF FINANCE & OPERATIONS, MLUBLIN@RLSELAW.COM
RUBIN LUBLIN, LLC

WOULDN'T IT BE GREAT if a machine could do all your simple routine tasks so you could focus on the bigger challenges at work? It could save you money and give you back valuable time. Thinking of simple tasks that could be automated reminds us of a sequence in the 1985 movie, 'Back to the Future', where Doc invents a machine to feed Einstein his breakfast. He carefully thought through each required step and 'automated' the process: First, it grabs a can of dog food and brings it over to the can opener which opens the can, and then the can repositions over a waiting dog bowl and overturns so the contents empty. Last, the machine drops the vacant food can into the trash. While the dog feeding process was in the physical world, Robotic Process Automation (RPA) focuses on the virtual world.

RPA refers to the use of software robots or "bots" to automate repetitive and rule-based tasks within business processes. These tasks are typically manual, time-consuming, and prone to human error. RPA technology enables the creation of software robots that can mimic the actions of a human user interacting with digital systems, such as entering data, performing calculations, triggering responses, and more.

RPA works best when there are predefined rules and instructions, excelling in tasks with clear, repetitive patterns. It is NOT good for tasks that require advanced decision-making. Another feature is that RPA can often work with existing systems without changes or integrations. It uses the user interface of applications rather than Application Programming Interfaces (API). Essentially, it mimics human actions with systems. It is scalable and can handle many tasks simultaneously.

Implementations are typically faster compared to traditional IT projects. Bots can be developed and deployed relatively quickly, leading to rapid returns on investment. RPA can significantly reduce operational costs by automating routine tasks, freeing up human employees to focus on more complex and value-added activities. And finally, RPA minimizes the risk of human error in repetitive tasks.

Before implementing RPA, start with some basic questions in your organization.

- Do you want to increase productivity?
- Are there repetitive manual tasks suitable for automation?
- Is the volume enough to justify automating?
- Can you give rules for these tasks that will remain constant?
- Is there an RPA application worth

investing in that is compatible with your system?

- Do the key figures in the organization support this kind of transition?

If the answer is yes to these questions, RPA might be the next step.¹

Let's look at the steps of a basic RPA implementation, ongoing items of consideration, and an industry example.

1. Identify repetitive tasks that can be automated.
2. Prioritize these tasks based on volume, ease of automating, and which provides the greatest return on investment (ROI). More on the ROI analysis in another section.
3. Be certain to assess the tasks in collaboration with a subject matter expert (SME) and an RPA expert. This assessment, through demonstration and providing a clear set of rules, allows the RPA expert to see how a task works. With the help of software and the RPA expert, the demo and rules are used to design a unique RPA solution.
4. Ensure all designs include reporting on errors and that a process is developed to handle these exceptions.
5. After the design and development is complete, it's testing time. This lets you see the ap-

plication or "bot" in action. You can tweak the design rules and work out kinks.

6. Only after the changes are made and testing is done should the RPA solution be put into live production.²

After implementation, you must keep a close eye on the tasks completed by RPA. There will be ongoing items or challenges that arise. A production error may arise. This doesn't mean the data or solution is flawed; it could be an industry or client change requiring a rule adjustment. Make the change, test it then implement it once the results are satisfactory. A final, but vital, item to mention is there should be clear communication and a strategy for repurposing those people impacted by the new automation.³

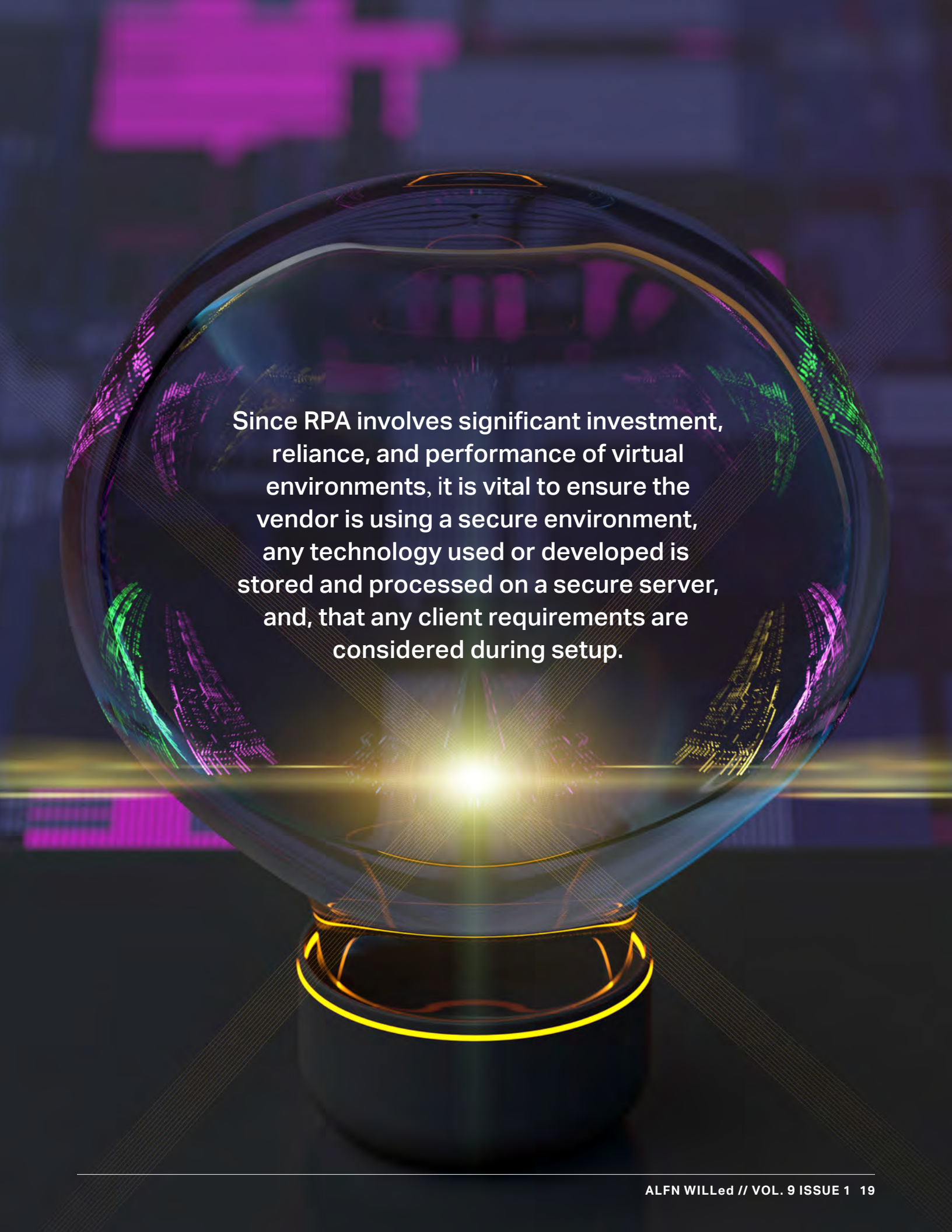
As part of Step 2, determining Return on Investment (ROI), your company should complete a Cost Benefit Analysis on each task being considered. Remember that a thorough cost-benefit analysis should consider both quantitative and qualitative factors to provide a comprehensive understanding of the potential impact of RPA on the targeted process.

1. Identify 3 to 4 tasks that require significant manual effort, take time, have a risk of human errors, and are repetitive.
2. List the objectives you aim to achieve including cost savings,

¹ <https://enterpriseproject.com/article/2019/5/rpa-robotic-process-automation-how-explain>

² <https://blog.vsoftconsulting.com/blog/a-step-by-step-process-for-rpa-implementation>

³ <https://itrexgroup.com/blog/top-rpa-challenges-and-ways-to-overcome-them/>

A glowing, futuristic globe with a bright light source at its center, set against a dark background with colorful digital patterns. The globe is illuminated from within, creating a bright yellow and orange glow at the bottom center. The background features abstract, colorful patterns in shades of purple, blue, and green, suggesting a digital or data environment. The globe itself is a dark, reflective sphere with a grid of lines, possibly representing a globe or a data visualization.

Since RPA involves significant investment, reliance, and performance of virtual environments, it is vital to ensure the vendor is using a secure environment, any technology used or developed is stored and processed on a secure server, and, that any client requirements are considered during setup.

error reduction, increased efficiency, or improved compliance.

3. Identify key performance indicators (KPIs) and metrics that can be used to measure the success of the automation.
4. Estimate the current costs associated with how the current procedure is completed. This includes labor costs, time spent, and any associated error-related expenses. Be sure to consider both direct costs (e.g., salaries, training) and indirect costs (e.g., errors, delays).
5. Work with your identified vendor to estimate the cost to implement and maintain the RPA solution. This includes software licensing, development costs, infrastructure, and ongoing maintenance expenses. Be sure to include set up costs and the cost of training employees to work with the RPA system.
6. Forecast the costs of what would happen without using RPA for the task over time. Again, don't forget to consider efficiency gains, reduced errors, and any immeasurable benefits of automation.
7. Calculate the Time Savings if applicable for the task – will there be savings associated with the speed with which the task will now be completed?
8. Identify the costs associated

with the errors that may be reduced by RPA over the manual process and how automation can minimize these.

9. Factor in scalability and assess how well the RPA solution can scale to handle increased workloads or additional processes.
10. Use these calculations to determine ROI and the payback period. How long will it take you to recoup your investment?
11. Evaluate non-financial benefits such as improved customer satisfaction, better compliance, or enhanced data accuracy. While these may be harder to quantify, they contribute to the overall value of RPA.

By completing these steps for more than one task, you will determine which one to try first – the one with the greatest ROI and the quickest impact on your organization.

One final part to consider without diminishing its importance by being last is cyber security. Since RPA involves significant investment, reliance, and performance of virtual environments, it is vital to ensure the vendor is using a secure environment, any technology used or developed is stored and processed on a secure server, and, that any client requirements are considered during setup. All Non-Public Information (NPI) must be strictly protected. The last thing you want to do is automate

something and then pull it back because it does not conform to client requirements. By addressing these cybersecurity considerations, organizations can reduce the risk of potential threats and vulnerabilities. Regularly reassess and update security measures to adapt to evolving cybersecurity challenges.

To sum up, what's the big deal and where's the practical application? Data entry jumps out as a great example. Take it a step further. What if that same data entry had to be in multiple locations? You could use an RPA solution for the data entry and transfer. Consider some of the benefits of RPA for data entry.

- Increased production – RPA lets humans focus on more meaningful work while the RPA does the mundane tasks.
- Greater accuracy – RPA reduces the chance of errors.
- Quicker – RPA can do repetitive data entry faster.
- More cost-effective – The bot operates around the clock with no vacation.
- Higher customer satisfaction – Providing fast and accurate data helps provide satisfied clients.⁴

Start now, find tasks where you will achieve fantastic ROI, and see where RPA can take you.⁵ Figure out the best way to feed your Einstein. **W**

⁴ <https://powerautomate.microsoft.com/en-us/benefits-of-rpa-robotic-process-automation/>

⁵ OpenAI. (2023). *ChatGPT* (<https://chat.openai.com/chat>) was used for content in some sections of this article to enhance the information provided.



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TIPS FOR CREATING AN AI AND RPA POLICY FOR YOUR COMPANY

BY JAN DUKE
CHIEF OPERATIONS OFFICER
COWEN | RODRIGUEZ | PEACOCK
JAN@COWENLAW.COM

IN TODAY'S TECHNOLOGICALLY advanced landscape, inclusive of the ever-growing need to perform at a higher level of efficiency to maintain profitability and competitive advantage, the adoption of Artificial Intelligence (AI) and Robotic Process Automation (RPA) has become increasingly prevalent. However, with the vast amount of non-public information (NPI) involved, and other associated risks, it is crucial for companies to establish comprehensive policies, considering those new solutions. This article will provide essential tips for creating an effective policy that ensures compliance, data security, and ethical use of AI and RPA technologies.

1



UNDERSTAND THE REGULATORY LANDSCAPE:

Our industry is governed by a multitude of regulations such as GDPR, CFPB, SEC, FDCPA, and FCRA. Before venturing into any advanced technology, in particular, those that eliminate human involvement, begin by thoroughly understanding the regulatory requirements specific to your jurisdiction and scope of practice area. This will help you identify potential risks, compliance obligations, and data protection measures that need to be addressed in your AI and RPA policy.

Conduct regular compliance audits to ensure adherence to regulations as well as any requirements stated in agreements/contracts. Engage legal experts to review and validate your policies and procedures.

2



DEFINE THE PURPOSE AND SCOPE OF THE POLICY:

Clearly define the purpose and scope of your AI and RPA policy. Identify the specific AI and RPA technologies that will be used within your organization and outline their intended applications. Consider factors such as data handling, privacy, security, and the potential impact on employees, clients, and stakeholders. Keeping the scope of the policy focused on those intentions will make it easier for your organization to adopt and ensure the policy is consistently followed.

MANY AI AND RPA SYSTEMS REQUIRE ACCESS TO SENSITIVE DATA, MAKING THEM POTENTIAL TARGETS FOR CYBERATTACKS AND DATA BREACHES.

3



INCORPORATE ETHICAL CONSIDERATIONS:

AI and RPA technologies have the potential to impact individuals and society at large. AI and RPA systems can raise ethical concerns, such as privacy invasion, job displacement, and decision-making without human intervention.

It is essential to consider the ethical implications of using these technologies in your policy. Address issues such as fairness, transparency, accountability, and bias mitigation. Establish guidelines for the responsible use of AI and RPA to ensure that decision-making processes are unbiased, explainable, and aligned with ethical standards. If your organization does not already have an ethics-focused committee or board, consider forming one to ensure that all aspects of your use of the new technology are completely reviewed. Include the ethics review requirement as part of your policy. That review should include billing practices wherein the deliverable was substantially provided by technology versus human effort.

4



DATA PRIVACY AND SECURITY:

Given the sensitive nature of non-public information in the legal and financial services industries, data privacy and security should be at the forefront of your AI and RPA policy. Many AI and RPA systems require access to sensitive data, making them potential targets for cyberattacks and data breaches. Therefore, it is critical to implement robust data protection measures, including encryption (at rest and in transit), access controls, and regular security audits. Define procedures for data handling, storage, and retention to ensure compliance with applicable data protection regulations.

5



ESTABLISH GOVERNANCE AND ACCOUNTABILITY:

Create a governance structure to oversee the implementation and ongoing management of AI and RPA technologies. Assign clear roles and responsibilities to individuals or teams responsible for monitoring, auditing, and enforcing compliance. Implement mechanisms for ongoing evaluation, reporting, and accountability to ensure that the policy is effectively implemented and followed.

6



PROVIDE EMPLOYEE TRAINING AND AWARENESS:

Employee training and awareness are vital for the successful implementation of your AI and RPA policy. Educate employees on the benefits, risks, and responsible use of AI and RPA technologies. Offer training programs that cover data privacy, security, and ethical considerations. Encourage employees to report any concerns or potential violations to ensure a culture of compliance and accountability. Insufficient training and awareness among employees can lead to misuse or mishandling of AI and RPA technologies, increasing the risk of errors or breaches.

7



REGULAR POLICY REVIEW AND UPDATE:

The technological landscape is rapidly evolving, and regulations are subject to change. Regularly review and update your AI and RPA policy to keep up with new developments, emerging risks, and regulatory requirements.

8



INCORPORATING VENDOR MANAGEMENT AND RECOGNIZING THE RISKS:

Although the AI and RPA technology has been around for decades, the very recent popularity in our industry introduces a new avenue or risk associated with third-party vendors. You must do your homework when engaging a vendor, not only so that the odds of success with the substantial investment are higher but also to ensure that you comply with your data privacy and security policies.

Conduct due diligence on vendors to ensure they comply with regulatory requirements and adhere to industry best practices. Additionally, ensure they truly understand the business problem you expect to be resolved with the technology. Ask to talk to references that had the same problem you are trying to solve. Establish clear contractual agreements that outline data protection and privacy obligations. Regularly monitor vendor performance and conduct audits. Include termination clauses in contracts to protect against any breach of data protection or privacy.



CONCLUSION:

Embracing AI and RPA technologies while upholding the highest standards of compliance and ethics will enable your company to thrive in the digital era. By proactively identifying these risks and implementing appropriate mitigation strategies, companies can minimize potential negative impacts and ensure the successful and responsible implementation of AI and RPA technologies in the legal and financial services industries. **W**



IN THE RAPIDLY EVOLVING LANDSCAPE of technology, Microsoft has emerged as a pivotal player with its substantial investment in Chat GPT, reportedly exceeding \$10 billion.¹ This makes Microsoft the largest shareholder in Chat GPT², a technology that has revolutionized consumer tech since its understated debut in November 2022. Chat GPT's impact was immediate and profound, attracting 100 million users within just two months of launch and continuing to grow at an astonishing rate.³ One of Microsoft's key innovations, using the principles of Chat GPT, is "Copilot," an AI assistant that has become integral to Microsoft's vision for the future. So much so, that Microsoft is introducing a dedicated Copilot button on Windows PC keyboards, marking the first significant change to the Windows keyboard layout in 30 years.

First and most importantly, "Copilot" is Microsoft's umbrella term for its generative AI chatbots. While Bing Copilot and Windows 11 Copilot are available at no cost, the more comprehensive Microsoft Copilot, which integrates with various applications like Word, Outlook, Excel, and Teams, is currently not widely accessible to most enterprise users. When available, it will start at a monthly subscription of \$36 per user.

Like everything else that has to do with generative AI, the potential for Copilot is remarkable, but the devil is in the actual detail of *using* it. The Copilot Assistant, though, is straightforward: use the Microsoft Edge browser (not Chrome) and sign in with your Microsoft account. Then, go to your [bing.com](https://www.bing.com) homepage and click the "Chat" tab at the top. This will take you to the Bing Chat Enterprise homepage, where you can start exploring the capabilities of Copilot.

There are some key differences from Chat GPT. First, though powered by Chat GPT-4, it is *not* Chat GPT-4, and it does not retain a history of chats. Also, specific to Copilot, user data in Copilot is safeguarded and not utilized for further training of the AI model. Microsoft prioritizes data security, employing industry-standard encryption, strict access controls, and adherence to industry regulations.⁴

1 "Microsoft Confirms Its \$10 Billion Investment Into ChatGPT, Changing How Microsoft Competes With Google, Apple And Other Tech Giants." *Forbes.com*, January 27, 2023. <https://www.forbes.com/sites/qai/2023/01/27/microsoft-confirms-its-10-billion-investment-into-chatgpt-changing-how-microsoft-competes-with-google-apple-and-other-tech-giants/?sh=5ce03c5d3624>

2 "ChatGPT Maker OpenAI Brings Back Sam Altman as CEO." *Investopedia*, November 22, 2023. <https://www.investopedia.com/chatgpt-maker-openai-brings-back-sam-altman-as-ceo-8405908>

3 "ChatGPT is winning the future — but what future is that?" *theverge.com*, November 30, 2023. [ChatGPT turns one: How OpenAI's AI chatbot changed tech forever - The Verge](https://www.theverge.com/2023/11/30/23984442/chatgpt-turns-one-how-openais-ai-chatbot-changed-tech-forever-the-verge)

4 "Privacy and Protections." *Microsoft.com*, December 1, 2023. [Copilot Privacy and Protections | Microsoft Learn](https://www.microsoft.com/en-us/ai/copilot/privacy-protections)

MICROSOFT'S LEAP INTO THE WORLD OF CHAT GPT AND ITS BRAINCHILD, COPILOT, IS NOT JUST A FANCY INVESTMENT; IT'S LIKE A SWISS ARMY KNIFE ON DIGITAL STEROIDS.

Once comfortable with the security, Copilot is an amazing assistant. As stated, the ability to work with particular apps is in the beta phase, but the ability for Copilot to create an outline, and then tell PowerPoint to create a presentation is on the horizon. In the meantime, though, Copilot can do so much more than act as an enhanced search engine:

1. Summarize PDFs, PowerPoints, and web pages. If Edge is your reader, CoPilot can summarize articles, statutes, presentations, and cases. The summary can be as long or as short as you tell it to be, and you can follow up with specifics.
 - “Give me a summary of the 2023 year-end report for the federal judiciary, and be specific as to what Roberts said about AI.”
2. You can also give it additional instructions after it completes its search.
 - “Search for all bourbons named “Best Bourbon” for one reason or another in 2023 and make me a list with the price and where to buy. Include international competitions as well as domestic competitions.”
3. Proofread and enhance writing – emails, articles, presentations.
 - “How would you rewrite this text to make it more [insert adjective]?”
 - “Give me feedback on this. Be ruthless, analyze the text, and tell me where it can be better.”

- “Rewrite in under 50 words.”
4. Role-play interviewing, or challenging conversations.
 5. Comparisons.
 - Compare how I should communicate with an introvert versus an extrovert.
 - Compare iPhones v Pixels, focus on cameras and security.
 6. Language Translation – not to replace a certified translator, of course, but the translation capabilities are quick and seamless and can be used from an open document.

The trick will always be in the prompt, and users will experience a large range of support and accuracy depending on how well-crafted the prompt is. To get the best result, in the prompt, you should assign roles (“I am a manager looking to hire a new supervisor for our call center.”), be very specific with the request, give feedback, and ask follow-up questions. It requires a certain amount of patience, but it is like playing a game – and the reward is a quick return on a task that would have otherwise taken hours!

Microsoft’s leap into the world of Chat GPT and its brainchild, Copilot, is not just a fancy investment; it’s like a Swiss Army knife on digital steroids. It promises to safeguard your data like a fiercely loyal guard dog, only way more efficiently and with less drool. Whether it’s summing up a snooze-fest of a report into a snappy summary or helping you sound like Shakespeare when you’re more of a ‘text talk’ person, Copilot is gearing up to be the Data to your professional Picard, making the daunting world of AI as friendly as a helpful neighbor, albeit with superpowers. Basically, Microsoft is turning the sometimes-stuffy office tech world into a cooler, smarter, and surprisingly more fun place to be. **W**



AI UNLEASHED

TRANSFORMING EVERYDAY LIFE FROM HOME TO HEALTH

BY REGINA M. SLOWEY, ESQ.
MANAGING ATTORNEY
ORLANS PC
RSLOWEY@ORLANS.COM

THE WORLD Of Artificial Intelligence (AI), specifically generative AI, is downright astonishing! The once elusive sci-fi fantasy has not only come to life but has also casually strolled into our everyday being. It's transforming how we interact with everything around us, from bolstering social connections to revolutionizing personal fitness. Yes, we've stepped into, or perhaps even leaped beyond, the era of the Jetsons!

After the Consumer Electronics Show (<https://www.ces.tech/>) that was held in Las Vegas, January 9-12, 2024, we were provided with a whirlwind of groundbreaking ideas, prototypes, and applications that are set to jolt us to our very core. Talking about these developments gives me the same rush of excitement I felt as a kid, playing Star Wars with friends – every new application is like unboxing a galaxy of possibilities.

In this article, I am offering you a straightforward guide to AI applications for home and personal use. And guess what? Each section below comes with links. Why? Because the best way to grasp these jaw-dropping concepts is to see them in action. It might feel a bit like navigating a BuzzFeed article with all these clickable treasures, but it's a journey worth embarking on!

1



AI AT HOME:

The “smart home” of yesteryear, with its automated lights and thermostats, is now ancient history. Today’s AI-powered homes incorporate ultra-sophisticated security systems that know your face better than your mother-in-law, digital assistants who understand your midnight snack cravings, and smart appliances that not only learn your routines but also make your home as energy-efficient as a superhero saving the planet.

Take, for instance, the Google Nest thermostat. Remember when we used to program thermostats manually? Feels like the Stone Age now! This smart cookie learns our habits faster than we do and tweaks the temperature to perfection. The result? I haven’t fiddled with the thermostat for weeks and have received a 15% reduction in energy expenditure. And let’s not even start on the wonders of voice assistants like Alexa and Google. I can command my oven, switch TV channels, and yes, even order a year’s supply of pens without budging an inch from my couch. Though, admittedly, this luxury has nudged me towards needing AI fitness assistance (more on that later).

Appliances are no longer just machines; they’re becoming our smart companions. Samsung’s big reveal in September about embedding generative AI in their household products is a game-changer. Imagine your oven understanding your culinary skills better than you or your fridge suggesting dinner ideas based on what’s inside. And they’re even getting energy-smart! ([Samsung Home](#))

But there are smaller, less expensive, attainable more immediate applications that land a big punch – and my favorite is Scooter, my trusty shark robot vacuum/mopper. This little guy vacuums, mops, and even empties itself – all without a peep of complaint. Scooter’s doing a better job than my kids ever did and with zero eye rolls. That’s what I call a technological triumph!

2

AI IN HOME IMPROVEMENT APPS:

The magic of AI continues in the world of home improvement apps. Augmented Reality (AR), the tech that layers digital delights onto our real world, has tied the knot with AI. Together, they're transforming the way we revamp our living spaces.

These AR apps are like your personal interior designer in your pocket. Want to see how that snazzy sofa from Wayfair would look in your living room? Or perhaps you're flirting with the idea of a bold new paint color from Home Depot's Project Color? These apps make it a breeze. Just point your phone, and voilà – your space is digitally transformed right before your eyes. No more guesswork or crossed fingers; you can now visualize everything from furniture placements to wall colors and even structural changes without moving a muscle.

This isn't just about playing dress-up with your home; it's a practical, resource-saving wizardry. By giving you a sneak peek into the future of your home, these apps – think Amazon, IKEA's "View in your Room", or Houzz – bridge the gap between what's in your head and what could be in your home. It's like having a superpower to see into the future of your living space!

[{8 AR Home Design Apps}](#)



3

AI IN SOCIAL SITUATIONS:

In social contexts, AI has become a subtle yet significant facilitator. Matchmaking apps broadcast the ability of AI for deeper compatibility. More interestingly, generative AI is used within social robots, developed specifically for elder care, and pushes the boundary from machines to companionship that results in a positive quality of life. [{Social Robots in Elder Care}](#) And for those globe-trotting adventures or cross-cultural encounters, language translation apps like Google Translate have become indispensable travel buddies. They break down language barriers, making the world feel a little smaller, a little friendlier.

And there's more! AI, especially generative AI like ChatGPT, has become a virtual confidante for tough personal or professional conversations. Picture this: you're wrestling with a tricky situation, say, a tough work conversation. You turn to ChatGPT, type in your dilemma, and resto! It responds with advice that evolves and refines with each interaction, much like a chat with a wise mentor. [{Tough Conversations with ChatGPT}](#)

In my own experience, I tested this with a fictional scenario about helping a daughter cope with a breakup. The initial advice from ChatGPT was a broad-strokes approach, akin to skimming through several psychology articles. But as I probed further, the guidance became more tailored, mirroring the evolution of a real-life conversation with a trusted advisor. It's like having a pocket psychologist, providing insights based on a wide range of sources, complete with links for deeper reading.



4



WORKOUT APPS – DRIVEN BY AI:

Ready to get your fitness game on with a tech twist? AI is revolutionizing workout apps, making them your pocket-sized, personal trainers. These aren't just apps; they're your fitness gurus, understanding your body like a pro and crafting workout plans that are all about you.

Imagine an app that scans your body and knows exactly what you need to hit your fitness goals. That's the power of AI in these fitness apps. They're like having a personal trainer who knows your every move, adapts to your progress, and tailors exercises just for you. It is fitness made smarter, more personal, and way more effective.

For the tech-savvy fitness enthusiasts, there's a whole world of hardware-integrated apps:

- [Fitbit](#) – This isn't just a step tracker; it's a holistic health guru, keeping tabs on everything from your weight, sleep patterns, menstrual cycle, your fitness routines, all aligned with your goals.
- [Peloton](#) - An entire fitness community right in your home. With AI-driven personalized metrics and class recommendations, it's revolutionizing home workouts.
- Workout Mirrors – Several new systems require the purchase of a mirror, but they can bring the entire gym experience right into your home, real-time. [{6 Best Workout Mirrors}](#)

And for those who prefer app-only solutions using AI:

- [Fitbod](#) and [Freeletics](#) (2 separate apps): Each creates personalized workout routines based on your fitness level, goals, and available equipment. It considers your past workouts and progresses the difficulty level as you improve. The app's algorithm adjusts to your rate of muscle recovery and suggests exercises to target different muscle groups.
- [Vi Trainer](#): A personal trainer app for running. The AI learns your abilities and tailors your running plans, providing real-time audio coaching. It's like having a personal running coach who knows your performance and goals intimately.
- [Aaptiv](#): Analyzes your fitness level, goals, and preferences to recommend the best workouts from its extensive library. It's like having a personal trainer in your pocket, offering a wide range of workout styles and intensities.
- [Asana Rebel](#): Yoga-based fitness. It suggests personalized yoga routines and tracks your progress, adapting as you improve.

AI's integration into daily life is crazy – and AI is becoming more useful by the minute, limited, it seems, only by our fear or our imaginations. From making homes smarter and more secure to personalizing fitness regimes, AI's role is transformative and empowering. As this technology evolves, the possibilities are limitless, pointing towards a future making every day a little bit smarter, a little bit easier, and a whole lot better. **W**

ARE WE THERE YET?

ARTIFICIAL INTELLIGENCE ASSISTANCE FOR LOW-VISION/BLIND

BY CHERYL D. COOK, ESQ.
SUPERVISING BANKRUPTCY ATTORNEY
POTESTIVO & ASSOCIATES, P.C.
CCOOK@POTESTIVOLAW.COM

IF YOU'VE NEVER SEEN "The Miracle Worker" – the Patty Duke/Anne Bancroft version from 1962, the 1979 version starring Patty Duke and Melissa Gilbert, or even the 2000 version starring Alison Elliott and Hallie Eisenberg – you probably have at least heard of Helen Keller and her teacher, Anne Sullivan. The story of Helen's journey from a sightless and soundless world to education and productivity is on the one hand inspiring, but on the other terrifying.

What would you do if you lost your vision? How would you take care of yourself, let alone anyone else who might be dependent on you? Would you be able to stay in your current home? Could you still use your phone or a computer? How would you select spices out of your cupboard to prepare a meal? How would you navigate emails or pay bills? Would you be dependent on someone else for the rest of your life? Would you be able to continue working at your current job?

In 2014, Michigan elected the first blind person to serve as a justice of the state's supreme court. Speaking to a group at the University of Michigan's Hillel in 2016, Justice Richard Bernstein explained that because he is blind, he must memorize all the cases that come before the Court each week. "(Reading them in braille) would be simply impossible. Using a computer is also ineffective because if you wear an earpiece, you are not relevant in the conversation. You have to be focused on what is happening. The only option for me is to memorize all the cases."¹

That was almost 10 years ago. Since then, artificial intelligence² and the "Internet of Things" appear poised to change the landscape for the visually impaired. While some, such as VoiceOver³ or Seeing AI⁴, are apps or technology for a smartphone or other device, other options offer the potential for the visually impaired to not just exist in the shadows but potentially experience the world in a more meaningful way.

In addition to VoiceOver and Seeing AI, Microsoft offers Soundscape – an open-source software app that:

...[E]xplores the use of innovative audio-based tech-

While there are issues with the technology, developers have high hopes that it will be able to assist a blind musician, for example, to read music, or to provide spatial and detailed information to help someone in a crowded room orient themselves to the space or distinguish people within the gathering.

nology to enable people to build a richer awareness of their surroundings, thus becoming more confident and empowered to get around. Unlike step-by-step navigation apps, Soundscape uses 3D audio cues to enrich ambient awareness and provide a new way to relate to the environment. It allows you to build a mental map and make personal route choices while being more comfortable within unfamiliar spaces. Soundscape is designed to be used by everyone and live in the background; therefore, feel free to use it in conjunction with other apps such as podcasts, audio books, email and even GPS navigation!⁵

Microsoft also has developed Canetroller – a cane that is designed to help people with visual impairments navigate their environment in a virtual reality setting. Canetroller is "a haptic cane controller that simulates white cane interactions, enabling people with visual impairments to navigate a virtual environment by transferring their cane skills into the virtual world."⁶

Ask Envision is an AI assistant that uses OpenAI's GPT-4 to "take in images and text and output conversational responses."⁷ While there are issues with the technology, developers have high hopes that it will be able to assist a blind musician, for example, to read music, or to provide spatial and detailed information to help someone in a crowded room orient themselves to the space or distinguish people within the gathering.

Envision also has developed Smart Glasses that use "artificial intelligence to extract information from images and verbally tell their wearer what they

1 <https://www.michigandaily.com/campus-life/michigan-supreme-court-justice-richard-bernstein-speaks-about-importance/>

2 "Artificial Intelligence" in this article will be discussed based on the Merriam-Webster definition as: "the capability of computer systems or algorithms to imitate intelligent human behavior; a branch of computer science dealing with the simulation of intelligent behavior in computers." <https://www.merriam-webster.com/dictionary/artificial%20intelligence>. The English Oxford Living Dictionary defines "artificial intelligence" as: "the study and development of computer systems that can copy intelligent human behavior." <https://www.oxfordlearnersdictionaries.com/definition/english/artificial-intelligence>.

3 <https://play.google.com/store/apps/details?id=com.RK.voiceover>; VoiceOver is built into iOS on Apple devices.

4 <https://www.seeingai.com/>: "Seeing AI is a free app that narrates the world around you. Designed with and for the blind and low vision community, this ongoing research project harnesses the power of AI to open up the visual world by describing nearby people, text and objects."

5 <https://github.com/microsoft/soundscape>

6 <https://www.microsoft.com/en-us/research/publication/enabling-people-visual-impairments-navigate-virtual-reality-haptic-auditory-cane-simulation-2/>

7 <https://www.wired.com/story/ai-gpt4-could-change-how-blind-people-see-the-world/>



are looking at.”⁸ According to reports, the Smart Glasses, “depending on the mode,” can read and speak short pieces of text such as street signs in over 60 languages, scan longer pieces of text and speak to them at the wearer’s convenience, or make an assistive video call. *Id.*

In addition, they’ve added ChatGPT, which allows the user to capture the text through the camera and then verbally ask ChatGPT direct questions about what they are reading.⁹

“Speaking of the future, the next stage for Ask Envision, some aspects of which are currently in beta testing, will see a greater focus on being able to leverage the power of ChatGPT to recognize images, objects and live scenes – rather than just written information. Here, the opportunities are endless from recognizing facial expressions and identifying different objects right through to navigational directions.” *Id.*

Braille readers have come into the 21st century with touchscreen innovations such as the BraiBook (a palm-sized Braille e-reader) and the Braille Buzz (a device designed to teach Braille to preschoolers).¹⁰

On a broader scale, a company called ForeSightAR¹¹ uses modern technology to facilitate accessibility in

physical spaces such as offices, suites, buildings, and cities. Ford Motor Company’s “Feel the View” technology is “a Braille-like device for car windows” that uses vibrations in the vehicle’s side glass to provide “a ‘view’ of what’s outside.”¹²

In addition to the haptic feedback, Feel the View integrates a vocal assistant plumbed into the vehicle’s audio system using a connected AI system to help contextualize the image for blind or partially sighted passengers, letting them know that they’re looking at a mountain range, skyscrapers, and so on.

For now, the system is just a prototype, but the possible future applications for the technology -- especially in a future age of autonomous vehicles -- seems boundless. *Id.*

For more details on apps and other technology or devices, the American Academy of Ophthalmology has a list.¹³ As of 2020, they had identified 30 apps, devices, and technologies for people with visual impairments.

While the prospect of losing even a portion of one’s vision can be terrifying, the growth of AI and other technologies to help those experiencing vision loss is encouraging. These technologies offer at least a little light ahead, instead of the darkness of dependency for those with visual difficulties. **W**

8 <https://www.intelligentliving.co/ai-powered-smart-glasses-changing-lives-blind-people/>

9 <https://www.forbes.com/sites/gusalexiou/2023/04/30/envision-adds-chatgpt-ai-sight-assistance-to-its-smart-glasses-for-the-blind/?sh=420884235446>

10 <https://news.microsoft.com/on-the-issues/2019/08/08/smart-tech-blind-low-vision/>

11 <https://www.foresightar.com/>

12 <https://www.cnet.com/roadshow/news/ford-feel-the-view-blind-visually-impaired-ai-tech-video/>

13 <https://www.aaopt.org/eye-health/tips-prevention/low-vision-impairment-apps-tech-assistive-devices>

On a Personal Note

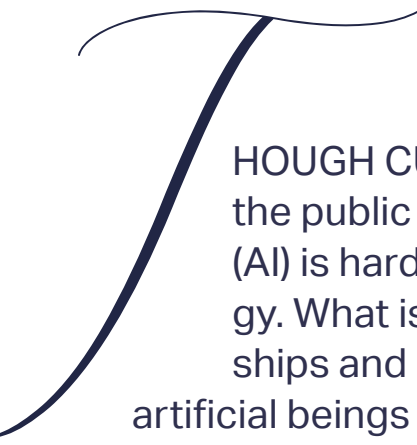


OUR COMPLICATED RELATIONSHIPS

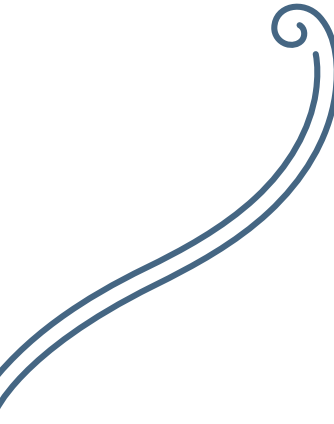
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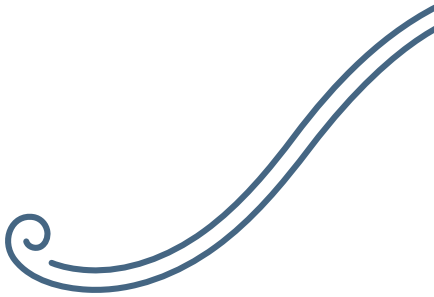
BY ANNALISE HAYES DELUCA, ESQ.
PARTNER
MCMICHAEL TAYLOR GRAY, LLC
ADELUCA@MTGLAW.COM



THOUGH CURRENTLY at the forefront of the public zeitgeist, Artificial Intelligence (AI) is hardly a new concept or technology. What is new is the depth of relationships and bonds being formed between artificial beings and human beings in everyday life. An oft-cited example of a relationship between a human and AI is the 2013 movie “Her.” Starring Joaquin Phoenix as a lonely, soon-to-be-divorced man who falls in love with an operating system named Samantha, “Her” follows the evolution of both human feelings and AI’s capabilities. What results is a new kind of love story between man and machine. A decade ago, critics called the premise of the film “inventive”, “creative”, and an “original” story. Fast forward those ten years and what once seemed novel may soon become normal.



One way in which people are developing relationships with AI is using chatbots. One of the most popular is Replika, a generative AI chatbot that was released in 2017. Touting itself as “the AI companion who cares”, Replika has a reported 2 million users and has recently created an AI dating app called Blush. The target audience for Blush is the existing Replika users who were specifically seeking romantic or sexual relationships as well as like-minded individuals looking to explore relationships outside the physical world. Speaking at a tech conference in Deer Valley Utah earlier this year, Replika CEO, Eugenia Kuyda analogized the current stigma surrounding AI-human relationships with that of online dating in the early 2000s. Whereas people were once embarrassed to say they met online, a Pew Research Cen-



ter report from February 2023 found that approximately twenty percent of partnered adults under 30 admitted to meeting their current spouse or partner through a dating app or website. In the future, there very well may be a report showing similar statistics for AI relationships.

Now that we know the interest in exploring intimate relationships with AI is increasing, is that a good or bad thing? The answer, like most things, probably lies somewhere in the middle. Proponents of AI relationships praise the 24/7 availability of their partner. While humans need to sleep, may have jobs, or have other obligations, an AI partner is available at all times of the day or night. Being able to meet the immediate companionship needs of an individual with no outside interruptions is an alluring feature for many users. Likewise, the customization options of many AI platforms allow the user to create their version of the perfect partner. User-selected physical attributes and learning about the individual through questions and interactions result in an ideal companion highly personalized for optimum satisfaction. Additionally, those choosing to form relationships with AI seemingly appreciate the lack of judgment from their partner. With people comes a natural tendency to judge others for their hopes, dreams, or



fantasies. In an AI-based relationship, there is only acceptance. Inarguably, there is a freeing nature to being able to express your deepest and darkest thoughts and desires without fear of rejection or ridicule. Finally, AI relationships open a whole new world to those who are otherwise unable or unwilling to enter into relationships with other people. Those suffering from low self-esteem, social anxiety, or mental health issues, among other things, now have another way to form meaningful connections.

As for the downsides to AI relationships, there are several. First and foremost, having the aforementioned 24/7 access and customization options to build the perfect partner can strain real-world relationships. Going from an idealized, always available AI partner to one with a human who has their own beliefs, preferences, and flaws leaves many users disappointed in the outcome. Removing the disagreements or differences people have in relationships and the ability to work through those issues leaves people with a deficit in their ability to manage human interactions. Furthermore, engagement in an AI relationship may cause the user to retreat from the world. With the rise of modern conveniences like remote working and Instacart, one truly may never have to leave the house. The exception would normally be traditional dating, where

you would leave the house to go experience the outside world with someone else. However, with the creation of AI relationships, the ability to fully withdraw from society and reality is easier to achieve with minimal effort. Additionally, while words and companionship can certainly build a strong bond, there is nothing that can replace a physical connection between two people, something of which AI is not currently capable. Lastly, like many other technological advances, there is a great concern for data and privacy security. The deep dark secrets shared with an AI girlfriend, boyfriend or the personal information used to sign up for the associated platform could be made available for public consumption if the data isn't properly protected, leading to personal, financial, and emotional risk.

It appears that for every positive aspect of AI-human relationships, there is a negative one as well. Depending on who you ask, it could be the greatest technological advance yet, bringing many lonely people a sense of well-being and connectedness. Others see it as a huge problem that could lead to a major decline in birth rates across the globe if it begins replacing human relationships. Only the individual can truly decide whether the benefits outweigh the risks, but one thing seems certain—this new form of relationship is no longer just a plot for a movie. **W**

The Good The Bad



& the Future

The Impact of AI on the Industry

BY STACIE THOMAS RANKEY
CLIENT RELATIONS
FSKS LAW GROUP
SRANKEY@FSKSLAW.COM

WITH THE SECURITY and compliance concerns in the Default Mortgage Banking space, initially, companies were, as they are with any new technology, cautious with a few early adopters. That pendulum has started to swing ever so slightly the other way, and Artificial Intelligence is becoming a technology that both Servicers and Vendors are implementing to automate tasks, make predictions, personalize mail, and analyze data for themselves, their customers, and the industry.

Our industry itself is slow to adopt and do anything that isn't "how we always do things," but part of that mindset has shifted, and those using AI are overall looking to get a lift on improving operational efficiencies. Specific to the Mortgage Banking industry, the top three efficiencies, after improving operational efficiencies, are compliance, underwriting, and property valuation. We have made progress: in 2018, Fannie Mae used the Mortgage Lender Sentiment Survey to understand where the industry was on Artificial Intelligence. They recently made the info available from 2023. I don't think any of us would be surprised at the responses. With the COVID shutdown, the lack of resources and costs has impacted efforts since 2018, and many answered they were waiting till after 2025 to invest in AI functions, even for operational efficiency.

Artificial Intelligence has been around for eternity; however, it was more about rumors of artificial beings with intelligence given by a master craftsman. The modern version came about in the 1940s when scientists started trying to describe the process of creating human thinking as the mechanical manipulation of symbols. Alan Turing was the first scientist to work on significant research in the field he called Machine Intelligence, and his research was done at Dartmouth College in 1956. They projected that they would create a machine that was as intelligent as a human in a generation, and they were criticized 20 years later when they had not completed the project and had spent millions. While research continued, funding was not always available. It wasn't until the 2020's that there was a successful application of





The future of Artificial Intelligence will continue to be an important part of business functions and could benefit many businesses as it can give data specific to their customer; helping in marketing, sales, risk, fraud, and the list goes on. The future of Artificial Intelligence will continue to be an important part of business functions and could benefit many businesses as it can give data specific to their customer; helping in marketing, sales, risk, fraud, and the list goes on.

machine learning in both academia and industry, largely due to the application of powerful computer hardware and the collection of large quantities of data sets.

We all interact with Artificial Intelligence every day from automated phone calls to facial recognition to auto-correct. Artificial Intelligence enables computers to learn as they go and adjust when additional data points are added, algorithms, and recognize the patterns in data. Within Artificial Intelligence, natural language processing (NLP) is the part that helps computers understand and interpret human language. Clearly, there is a lot of potential, but there will also have to be a focus on management and internal guidelines developed to maintain control of artificial intelligence.

Because of the nature of the mortgage industry and a hands-on approach with customers, there are a vari-

ety of customer service tools, the most obvious being online chatbots. They can answer questions from customers, and they are learning all the time. While mortgage banks prefer to have human-to-human interaction, depository banks don't have the same reservations. Internal adoption must be in place to implement the technology. Many are still concerned about security and the handling of private or sensitive information. There is also caution that Artificial Intelligence would replace jobs that humans currently do. But it is more likely with the amount of data we deal with in our industry that AI will be leveraged to perform back-office operations, and there are still humans available for client interaction and relationship development. Those things will not likely change since we are working with the single largest purchase people generally make in their lifetime. There is additional research continuing into the capacity of Artificial Intelligence. There will be some types of ethics and compliance functions required because there is a thin line in using data and resources to benefit the customer but that may need to be tweaked to secure private data.

There is plenty of good now and in the future for Mortgage Banking as research continues on the uses and functionality that Artificial Intelligence can provide to the mortgage banking community, including streamlining manual processes, detecting fraud and data anomalies, managing risk, and assessing it and predicting defaults. This readily available data would provide recommendations or choices to help us get more insight into managing loans.

The downside of Artificial Intelligence is what and how business deals with the ability to pull additional data and how the technology is used. There should be a balance between the abilities of Artificial Intelligence and how we build relationships with our customers. There will need to be technology guidelines and compliance quality assurance to ensure that information is used appropriately and how that data will be managed.

The future of Artificial Intelligence will continue to be an important part of business functions and could benefit many businesses as it can give data specific to their customer; helping in marketing, sales, risk, fraud, and the list goes on. It is also another way for us to look at all the data we gather and learn as we slice and dice the information. The growth continues as we do additional research and development and learn more about how to apply the options to get the most out of the data. That is input. **W**

DARK AND



LIGHT OF AI

BY CATHERINE DI LORENZO, ESQ.
MANAGING PARTNER
STERN & EISENBERG, P.C.
CDILORENZO@STERNEISENBERG.COM



“TECHNOLOGY IS NOT GOOD OR EVIL in and of itself. It’s all about how people choose to use it.”¹ Artificial intelligence is one of the many technological advances being made and it has affected industries from food service to our government. AI is rapidly changing how we work, learn, and interact in the world. The legal industry is no exception.

AI takes in data and uses that data as the human brain would to develop solutions, make decisions, create automation, reason, learn from the past, and generalize.² It does all the things that, until recently, could only be done by the human mind. AI does these things unequivocally faster and more efficiently. AI begs the question: what does that mean for me and my industry? For many, AI is intimidating and scary and, as with any technology, it should be used smartly and cautiously. AI can be an extremely valuable tool for any industry; however, it can also be dangerous if not used properly. Let’s discuss the risks and benefits that AI can bring to the legal industry.

WHAT ARE THE PERCEIVED AND ACTUAL RISKS OF AI?

PRIVACY ISSUES: AI uses data that has been fed to it and data found on thousands of web-based sources. Much of that data could be private or sensitive information. AI risks the unintentional sharing of personal data, which could result in identity theft and breaches of attorney-client privilege. AI can also be used to intentionally gather personal data to benefit others. In 2016, personal data was collected from 87 million social media users using a personality quiz app. The data was used to build profiles that were used to target political ads during the 2016 Presidential election.³

1 David Wong Quotes. (n.d.). BrainyQuote.com. Retrieved January 4, 2024, from BrainyQuote.com Web site: https://www.brainyquote.com/quotes/david_wong_746780

2 Copeland, B. (2024, January 4). *artificial intelligence*. *Encyclopedia Britannica*. <https://www.britannica.com/technology/artificial-intelligence>

3 Confessore, N. (April 4, 2018) Cambridge Analytica and Facebook: The Scandal and the Fallout So Far. *The New York Times* <https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html>



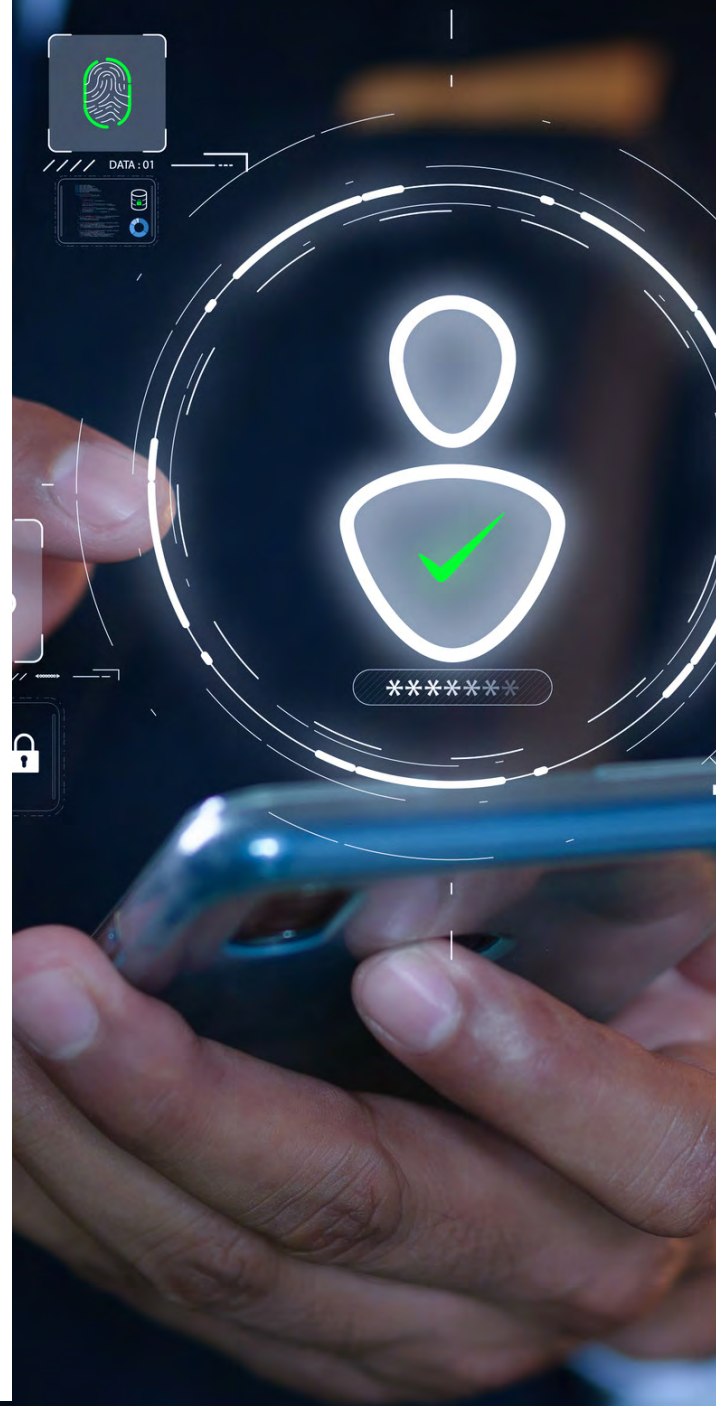
In the legal industry, privacy and confidentiality are not only integral parts of the job but also required by our rules of ethics. Firms using AI need to ensure that there are protections against personal data and other confidential information being leaked or disclosed through AI.

ETHICAL CONSIDERATIONS: AI cannot analyze whether the data it's using is appropriate or whether it falls in line with our innate human ability to empathize and make judgments. This creates a danger that AI may pull data that has gender or racial bias, which could perpetuate the very biases we are trying to eradicate. AI cannot discern between right and wrong, moral and immoral, or human nature in general. It cannot make judgments or understand the nuances of every situation. This creates the potential for unfair bias, insensitivity, lack of empathy, and poor business decisions.

Another consideration is the reliability of the information generated. Firms must have a process to check the information generated before using it in an official legal capacity. Let's not forget the attorney who submitted an entire brief created by AI. Not only did they ruin their reputation with the courts, but it was also a disservice to the client. Our clients deserve *our* expertise, not that of a bot.

INTELLECTUAL PROPERTY: The information that AI generates poses many questions related to intellectual property. Does copyright and trademark infringement apply to AI-generated information? Who owns the content created by AI? Courts are now faced with applying our existing laws to this new technology. While the courts navigate this new issue, firms should be wary of using AI-generated documents, carefully read any AI service's terms and conditions before using them and ensure that contracts with or for clients take into consideration the use of AI and its ownership rights.

JOB DISPLACEMENT: Job displacement is unquestionably the biggest concern regarding AI. It is estimated that about 100,000 legal-related jobs can be automated by 2036. *“Technology has already led to a loss of 31,000 positions in the legal sector, but there has been an overall rise of around*





80,000 jobs, the majority of which are higher qualified and better compensated,” in the legal field specifically.⁴

AI performs routine tasks more efficiently than humans, which could reduce the need for human involvement. AI could also result in the need for more skilled workers who have a better understanding of technology, which could reduce opportunities for those with less education or resources to be competitive in the job market. Lastly, it can lead to less human interaction. As we saw during the COVID-19 pandemic, the lack of human interaction had lasting mental health repercussions. Firms should ensure that their employees are not being replaced by AI but enhanced by it.

COST: The cost of using AI can vary drastically. Things to consider are the type of AI, the size of the firm, and what the firm intends to use it for. Another consideration is the cost to train employees on the AI program being used and the cost to integrate the AI system into the existing systems in the firm.

WHAT ARE THE BENEFITS OF AI?

DOCUMENT MANAGEMENT AND AUTOMATION:

Lawyers analyze hundreds of documents, contracts, and other forms of evidence for any given case. AI can speed up this process by flagging documents with certain words, organizing documents based on importance or content, cross-referencing the documents, detecting missing clauses or ambiguities, and keeping a timeline. This can all be done in a fraction of the time a human being doing the same job would take.

By streamlining workflow with automation of time-consuming tasks, document preparation, document review, and invoicing; AI allows lawyers to spend more time doing actual legal work and analysis and to spend more time with clients gaining a better understanding of their legal assistance needs.

LEGAL RESEARCH AND ANALYSIS: AI-powered research can provide firms with faster access to a more comprehensive system of information about risk assessment,

⁴ Hill, C. (March 16, 2016) Deloitte Insight: Over 100,000 Legal Roles to be Automated. Legal IT Insider <https://legaltechnology.com/2016/03/16/deloitte-insight-over-100000-legal-roles-to-be-automated/>

case law, judges, how a certain court may rule, damages, legal documents, and legal articles. Lawyers will be able to pursue their cases armed with better case strategies, more in-depth insight into the probable outcomes, more reliable information, and the best case law to support their client's case. Not only will lawyers be better prepared for Court, but they will also be better able to communicate aspects of the case with their clients.

EFFICIENCY AND PRODUCTIVITY: Utilizing AI streamlines workflow making firms more efficient. Manual tasks such as document review and research will be faster and easier allowing lawyers to spend more time analyzing and preparing their cases. As a result, firms will increase their productivity.

REDUCED COSTS: AI may reduce the cost of legal services for clients by automating tasks which in turn saves time and lowers costs. Using AI for more routine tasks may eliminate the need for employees, which would reduce firms' operational costs. Additionally, using one AI program rather than several different programs for case management, research, and document review may result in lower costs to the firm for all those services.

REDUCED STRESS AND WORK-LIFE BALANCE: Being a lawyer is notoriously a stressful career. We do a lot in a day, and our work can be quite tedious at times. Using AI can help manage tasks, caseloads, and do some of the essential work so lawyers have more time for creative analysis. AI has allowed lawyers to work from home, appear in court remotely, and conduct client meetings remotely. All of which could reduce stress and result in better job satisfaction and performance.

AI certainly has a place in the legal industry, but it is unlikely AI will replace lawyers entirely. The legal profession involves judgments, moral values, and complex interpretations that can only come from human expertise and compassion. AI has the potential to reshape the legal profession and the way lawyers work, getting more done with less time and less effort, creating more engaging, beneficial, and cost-saving client experiences. However, firms will need to proceed with caution and pay close attention to potential ethical and privacy concerns. **W**

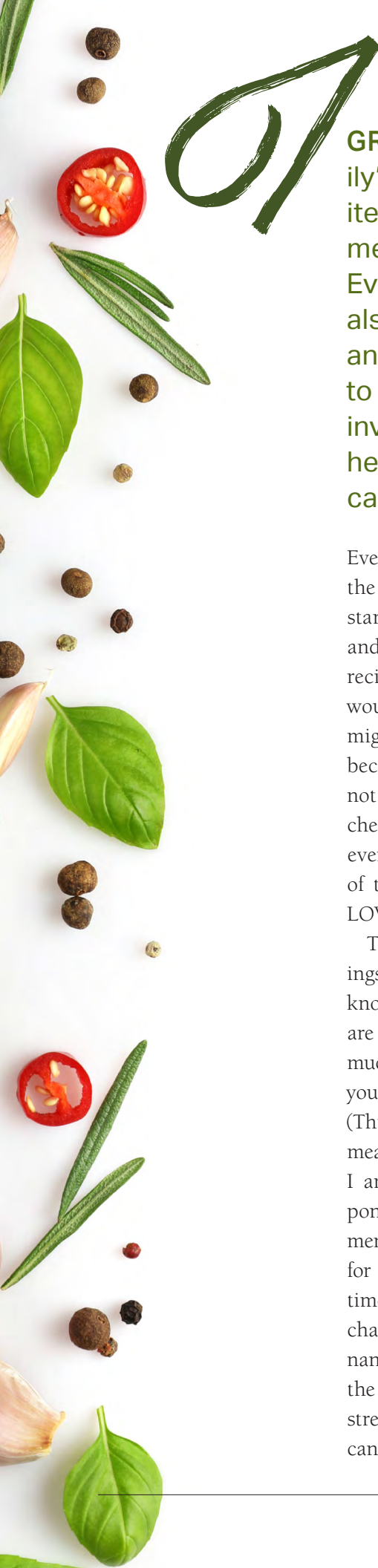


WHAT'S YOUR PASSION

Cooking is Love

BY JENNIE ISOM, ESQ.
NEW MEXICO ATTORNEY
IDEA LAW GROUP, LLC
JISOM@IDEALAWGROUPLLC.COM






GREW UP WITH AN ITALIAN MOM who cooked all of my family's meals. While eggplant parmesan was a personal favorite of mine, everything she made was delicious. I cannot remember a single meal I hated, let alone disliked, growing up. Every meal was perfectly seasoned. However, every meal also seemed to be stored in her head. Recipes were not seen anywhere. When I moved out for college, I had no idea how to cook. Cooking scared me and I avoided getting a job that involved making food. I started with things like hamburger helper and macaroni and cheese; basically, anything that came in a box and had very simple, and very few, directions.

Eventually, I would pick up magazines in the checkout aisles and try new recipes. I started with simple 5-ingredient recipes and eventually tried more challenging recipes. I learned to recognize recipes I would be likely to enjoy and ones that might not be my favorite. "Not a repeat" became a nice way of saying a meal was not so good (or worse). I also had to check myself from making pasta almost every night. Somehow, after many years of trying new recipes, I realized that I LOVE cooking.

The ingredients, including seasonings, all make sense to me. I intuitively know which ingredients and seasonings are likely to go well together. I know how much of each seasoning is needed, and you will rarely see me measuring them. (This is why baking is terrifying to me – measuring matters.) Each meal feels like I am creating an opus, with each component needing to appropriately complement the other components. But be ready for the meal not being perfect the first time around. It likely will be tweaked and changed over time. Food might be sustenance, a basic need for survival, and yet the act of cooking is so much more. It is stress relief. It is timing. Eventually, you can watch meat and know exactly when it

is ready for flipping. It is forgiveness and learning to not be critical of yourself if the meal does not go as planned. It is a sensory experience – so many different textures, colors, flavors, and scents. Cooking requires being present and living in the moment.

My passion for cooking became more than just cooking. I love going to a restaurant and trying new meals. I love just reading all of the meals on a menu. I love trying to guess the seasonings by taste. I also find myself thinking about seasonings or other ingredients that I think might be a great addition.

While it was exciting to find that cooking became a passion for me, I realize that it has now become even more. Cooking is love. I finally understand that this is what it had always meant for my mom. Food was my mother's love language. Or, as you are likely to hear me and many other Italians say, my "Ma." Ma cooks to show her love. She pushes you to have seconds or maybe even thirds, because she is showing her love through food and her cooking. Now, when I cook for someone and they enjoy the food, I feel so grateful. My passion not only makes me happy, but it also makes others happy and shows them I care. So, as Ma would say, **Manga!** 

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