

How to fit Artificial Intelligence into Your Information Management Strategy

5 *Key Use Cases for Artificial Intelligence,
Machine Learning, and Deep Learning*



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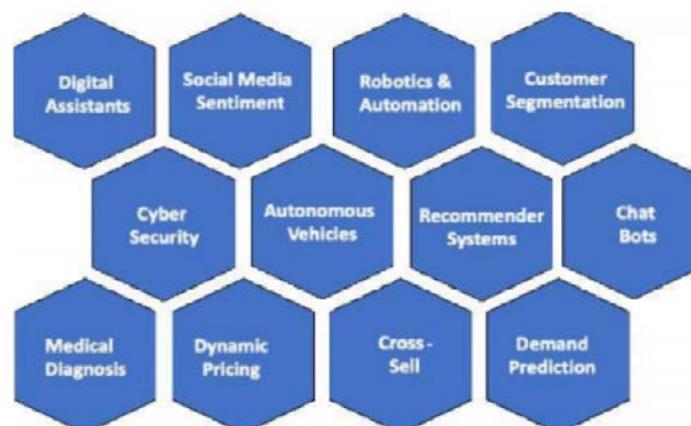
Artificial Intelligence (AI) — and its sidekicks “Deep Learning” and “Machine Learning” have quickly become all the rage in the Information Technology space. In fact, according to our 2019 research study, 81% of organizations said that Deep Learning and Machine Learning are key to their future technology and business planning.

As a result, these technologies have been generating a lot of talk – but maybe not as much action as you might assume. In that same 2019 research study, we also uncovered that only 13% of surveyed organizations report their AI adoption as Advanced (having had models in production for 5+ years) and over 45% were still exploring this technology.

So, why has AI implementation been so slow? One theory is that because AI has so many uses, users are challenged to identify where and how to apply AI in their own business.

As seen in the chart below, there are many areas where AI can be applied, from self-driving cars to robotics, medical diagnosis to drug discovery. In business, AI is commonly applied through the use of digital assistants and chat bots. We also see AI in systems that make recommendations or that analyze sentiment. We can predict demand, deliver dynamic pricing, segment our customers, and cross or up-sell to them.

Artificial Intelligence Applications



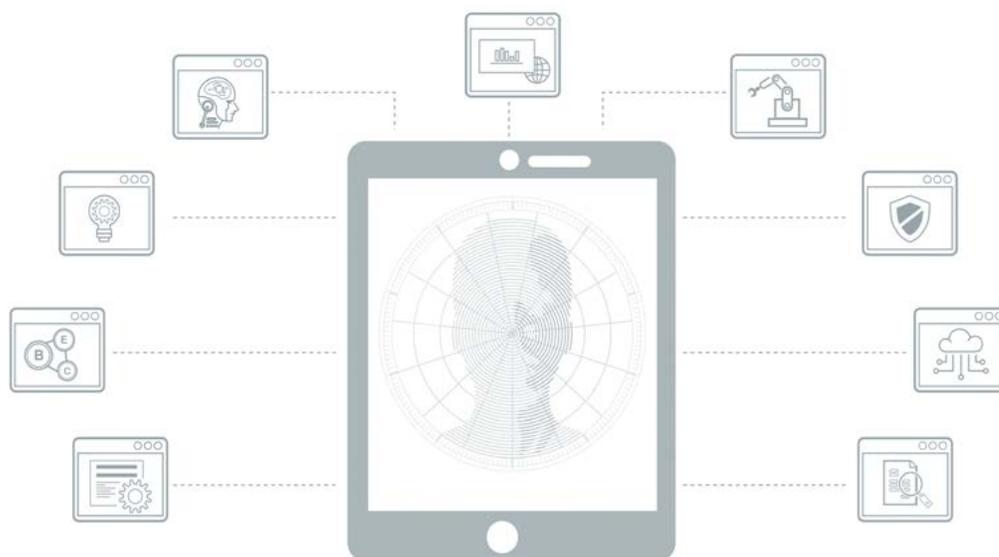
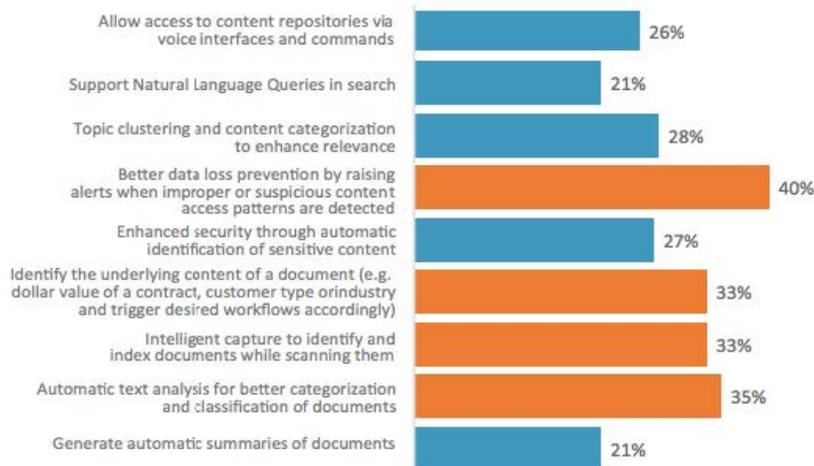
In a sense, we can easily imagine that AI is a good fit for any business situation. But it's more complex than that. For example, one AI method maybe a perfect fit for one business application, but not so good for another - sometimes AI is not a fit at all. We need to be careful when selecting where we apply AI.



To make sense of all of this, we need to break AI down into some digestible chunks, or buckets of AI use, and outline the most common cases for AI in information management.

In AIIM's 2019 eBook, [Leveraging Deep Learning and Machine Learning Capabilities](#) we explored AI's footing in content-centric applications to better understand how information professionals are using and /or *can be using* this technology to improve the way they manage their content:

Which are the THREE most important content-centric AI/Machine Learning use cases to your organization?





Let's take a deeper look at 5 of the most powerful use cases as outlined in AIIM's AI Training Course — [Practical AI for the Information Professional](#).

01 Use Case

Document Management

- Document Sorting and Categorization
- Document Topic Recognition
- Named Entity Recognition

AI is already being used to sort and categorize documents, more quickly and more accurately than was ever possible before. This may seem like a boring or mundane use case for AI but when one considers that many organizations have silos of tens of millions and in some cases billions of documents, it's a priority. In most cases, those silos are difficult to access and near impossible to search or extract much value from. AI changes that and radically changes the value of all new documents input to or created by the organization.

AI enables us not just to categorize and sort documents, but to create new groups of documents through recognition of the documents content — providing topic recognition. We can also use the Named Entity Recognition (NER) technique to look through documents and create new classifications — for example, all the files related to a certain person, location, organization or for that matter, medical or legal code classification.

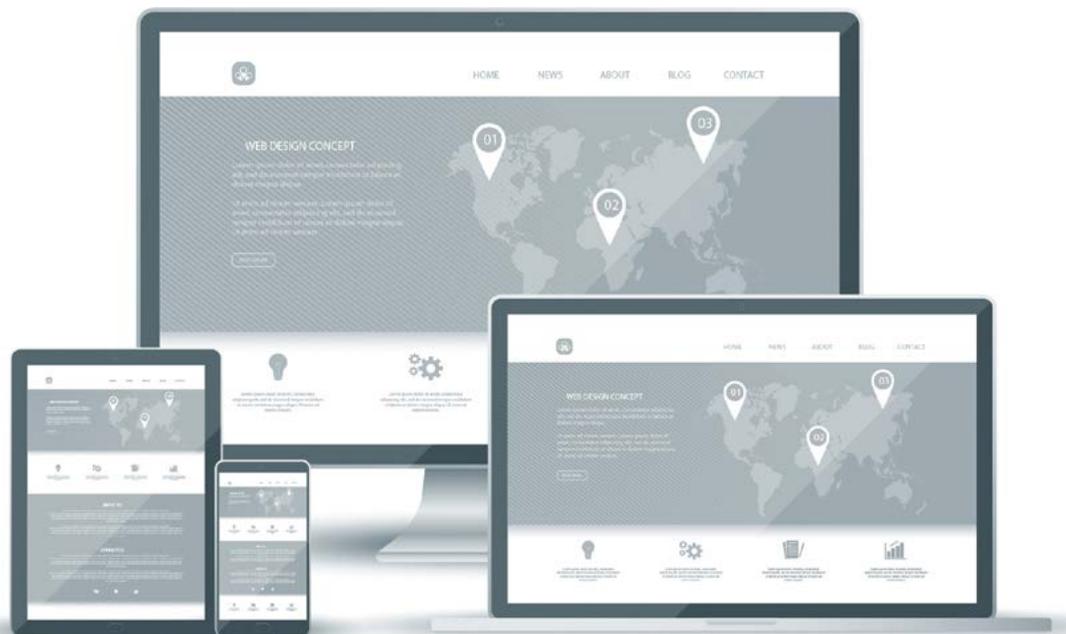
The sheer volume and richness of the data stored and gathered by document management system makes it an ideal target for multiple AI use cases that can bring fast and measurable business value.

Online and Digital Content

- Content Recommendations
- Spam and Spurious/Fake Content Flagging
- Search Results Ranking
- Automatic Ad Placement

The world of web content management and online digital content has been quicker off the mark than document management in the use of AI. It is already used extensively to make content recommendations and to identify spam or fake content. AI is used to improve the quality of search results and results ranking and of course, AI is also used extensively to automatically place ads online.

The world of online content has been faster out of the blocks to leverage AI — anyone with experience online — in other words all of us, are aware of its current limitations. Spam is not always correctly identified. Search results can be frustrating, and ads can be distracting and way off the mark. In some regards AI was used by the online content community a bit too quickly, or rather its accuracy was over estimated. Over time it will do a better and better job, but many lessons have been learned the hard way along the way.



Images and Computer Vision

- Optical Character Recognition
- Handwriting Recognition
- Face Recognition/Detection
- Image Object Detection
- Automated Image Tagging
- Automated Label Generation

Content is the lifeblood of business. Traditionally this has been in the form of documents and more recently web pages. But images and video are increasingly used both in social and business situations. Images can be anything from handwriting and signatures to faces or objects in an image.

AI plays a key role here in identifying and digitizing images. Handwriting recognition, though still a tricky area depending on whose hand writing is analyzed, is greatly enhanced by machine learning and image objects and faces in images are now regularly detected and classified by AI.

This has repercussions beyond the use of these systems in social media. Engineers are using AI to tag objects and structures in satellite images, doctors are doing the same in medical images, and lawyers are using AI to rapidly digitize handwritten statements and reports.

Automated image tagging and label generation has big implications for many use cases now and in the future. Until recently, images were poorly tagged (if at all) and were difficult to leverage as sources of content.



Security Management

- Data Loss Prevention
- Cyber Security Threat Detection
- Network Intrusion Detection
- Video Surveillance Alerts

Security used to be an entirely separate discipline to information management, but over the past few years the lines have begun to blur. Gone to a large extent are the days when information could be neatly locked into a specialist repository. Information, content, data is scattered all over the organization.

AiIM's research study - Automating Governance and Compliance, revealed that 51% of organizations say they are planning to spend "more" or "a lot more" on information governance (records management and digital preservation) in the next 18-24 months.

This key group of spenders also plans to invest in analytics and machine learning capabilities to automate key information governance and security processes.

	"We also plan to spend more or a lot more on these key AI and machine learning technologies in the next 18-24 months."	
"We plan to spend more or a lot more on Information Governance (records management and digital preservation) in the next 18-24 months."	Artificial intelligence, content analytics & semantics_	57%
	Data recognition, extraction & standardization	67%
	Metadata & taxonomy management	77%
	Document classification & PII	81%

In response, we are seeing AI come into play as a tool to enable data loss prevention initiatives and to detect security threats, network intrusion and even video surveillance alerts. When it comes to automating the security of data, be more cognizant than in any AI project. That security will be a critical factor that needs to be considered and AI itself may play a role in securing your data and system.

Speech and Natural Language Processing

- Text to Speech Conversion
- Speech to Text Conversion
- Language Translation
- Automated Content Generation
- Web chat bots
- Sentiment Analysis
- Emotion Detection
- Interactive Digital Assistance

Just like images, speech has been a format of content that has been difficult to leverage in the past, but AI is again rapidly changing that situation. For many if not most enterprises, speech files are hard to access and search, at best they are tagged with a date and a basic title. As a result, many information managers have simply ignored speech as a form of content. But text to speech conversion and more importantly (in information management terms) speech to text conversion has digitized and made speech a form of content that can be analyzed and managed.

It means that speech can be captured and rendered in chat bots, enabling us to understand different languages and generate translated content. The full implications of this in information management are still to be understood, but in an age of web conferencing and cell phones it could have a major impact on the scope of information management moving forward.

That's not to mention that AI goes further than simply digitizing speech — AI provides the tools to detect emotion or sentiment in speech — something that is of great interest to retailers, customer service and law enforcement. It also opens the doors to more interactive digital assistants in the workplace.



5 Key Use Cases for Artificial Intelligence, Machine Learning, and Deep Learning

Conclusion

Being able to visualize how AI can help improve your overall business strategy is an important initial step. With so many applications in business, AI can be an intimidating thing. By exploring these 5 examples in greater detail like we've done in this eBook, you can begin to apply them to your own business, and outline your individualized approach to harnessing the power of this technology.



The power to **Revolutionize Your Business**

Artificial Intelligence (AI) and its sidekicks “Deep Learning” and “Machine Learning” have the power to revolutionize your business, but it all starts with a solid understanding of its core concepts. AIIM’s Practical **AI for the Information Professional** training course provides real world use cases for this new technology in Information Management. Learn how AI works, methods for implementing it, and how to harness its power!

For further information [click here.](#)



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