Artificial Intelligence: Disrupting Modern Industries and Giants

Embracing the Future: The Transformative Impact of AI, Robotics, and Modern Banking Technologies

Advancing in technology has served a great benefit to most industries. While being a great benefit, it has also hurt a lot of industries as well. AI has infiltrated the business world and is taking down businesses faster than companies can keep up with. AI has made companies extremely successful and climb to the top of their industry, such as Amazon using more than efficient logistics and keeping prices low. Additionally, AI changes the way companies manage and operate, so if a company cannot keep up, it will get booted out of business. Some companies can recognize these changes fast enough to adapt. AI changes the way companies manage and operate, so if a company cannot keep up, it will get booted out of business. Today's world of business is truly focused on keeping up with the changing trends in the world and being able to adapt to them. We will be talking about artificial intelligence, robotic technology, and fraud tracking for banking.

Robotics has come a very long way since the beginning. Robots are machines that are used to perform jobs, according to NASA. They are simulated to think like the human mind and carry out tasks in a way like humans would. It is developed through computer science and programmed to be controlled. Basically, robotics is replicating human minds/ actions in a mechanic form. Robotics have become much more common, and we can find them in most environments. We see robotics in restaurants, the medical field, cars, and much more. NASA currently uses a robotic arm to build space stations, move parts into place, and much more. This allows NASA to be able to execute missions and make groundbreaking discoveries. We also see robot technology in drone delivery systems; a lot of this technology is still in the development stage but is still being tested. This is a technology that would disrupt the whole logistics industry and would give a company a highly competitive edge.

Artificial intelligence stems from computer science. AI is teaching machines to learn through data screening and discovery. Computers can be trained to process large amounts of data and learn to recognize patterns and such. AI is used in banking, health care, manufacturing, retail, and many more industries. It adds intelligence, knows how to clean and find useable data, is very accurate, uses algorithms to have the best possible outcome, and has incredible computer power to analyze big data. AI is used in Google searches, dating apps such as Tinder to analyze and give you the best matches suited for you based on a like-system ratio, social media such as Instagram to provide the best feed for your personalization, and even Amazon to give you recommendations.

Instead of having someone monitor your bank statements, or you personally have to keep an eye out, banks use technology to monitor spending habits and catch any activity that seems out of the ordinary. This prevents theft or a stolen identity. Because of this, banking has been able to guarantee customers a more secure experience, knowing that if anything happens, it will be caught within minutes. When I use my bank card 6 states away when traveling, I get a call immediately from my bank if I do not alert them. This creates the state of mind that I can trust my bank.

As these technologies continue to develop and their uses are more widely utilized, the effects of their disruptive benefits will become more prevalent. The first major benefit will come in the form of cost savings when companies choose to commission a robot or an artificial intelligence database to perform tasks that they are currently paying employees a premium to do. Secondly, these technologies will greatly reduce errors, the human aspect will be eliminated, and processes will be left up to programming or algorithms to farm data or manufacture products. Lastly, in safety, blockchain will help to safeguard sensitive personal information over its aggregate of connected servers, and with robots and artificial intelligence that can perform processes in conditions that would typically be hazardous to humans.

Which industries are the most vulnerable? Why?

Some of the major industries that will be hugely affected by the increase in both robotics and artificial intelligence are manufacturing, banking, construction, public transportation, financial analysis, insurance, taxi, farming, and healthcare businesses (Ryan, 2018). These are just a few industries that have clear insights into possible interruption within the next ten years. It is a common prediction that artificial intelligence will likely have an effect on transportation. The idea of self-driving cars is becoming increasingly popular globally, and developers have introduced ideas surrounding networks of cars that have the ability to communicate with each other. Another area considered vulnerable to artificial intelligence is the healthcare industry. IBM has created supercomputers capable of diagnosing patients, even with rare cases, when provided with proper medical information and history. Since this process was proven to provide quicker results than doctors were able to provide, more research and development are being done in the creation of "robot doctors" and advanced diagnosing software.

A majority of industries are likely to be affected by this technology. Most industries, especially those that store information, which is the majority of businesses, will need to take advantage of these systems and be familiar with the capabilities of artificial intelligence, robotics, and fraud tracking in order to implement them successfully. This could be the key to survival for any modern business that is entering or remaining in the market. Saving time, energy, and money could be the sole intention for incorporating AI into a business model. Times are changing rapidly, and it is crucial to stay on top of educating ourselves about and using this technology. For technology such as AI to revolutionize businesses the way that is predicted, we should use it as a tool and take advantage of our resources, especially to improve the business culture.

Which major companies are threatened? Why?

Artificial intelligence has disrupted many formerly large industries, as described above. In these industries, there are several examples of major companies that have already been disrupted or may, in the future, be threatened. For example, retail companies are very much threatened by artificial intelligence in the future, even though it seems unaffected today. To understand how artificial intelligence threatens a company, consider Uber as an example. Today, Uber, regarded as the world's largest taxi company, owns no vehicles. Instead, Uber pays regular people to use their personal cars. This new model of business revolutionized the taxi industry and effectively wiped out many formerly large taxi companies. However, new self-driving cars are currently undergoing development. This new application of artificial intelligence is showing promising results. According to James Paine, there were only 13 car accidents in Google's self-driving car trial, in which 1.8 million miles were driven. In addition, these accidents were all caused by the other car, not the self-driving vehicle. It seems inevitable that self-driving cars will begin to become common on the roads, which threatens Uber's current business model of employing human drivers (Condliffe).

It is safe to assume that Uber recognizes the threat of driverless cars. In fact, Uber has already invested about $1 billion dollars into purchasing self-driving cars from Volvo in 2019 through 2021 (Condliffe). Uber recognizes that their current business model, although it has performed well in the past, is severely threatened by artificial intelligence.

The public accounting industry has also been threatened by the new artificial intelligence technology.

To illustrate this, consider the example of PricewaterhouseCoopers (PwC). PwC is one of the "Big 4" accounting firms. It provides services in 158 different countries through 743 locations and over 236,000 professionals. PwC is a massive force in the business world.

However, its three major service lines, assurance, tax, and advisory services, are all threatened by artificial intelligence.

Through new software that uses artificial intelligence, companies, and individuals no longer need more basic accounting services. For example, if technology improves, tax software may become so adept at interpreting and applying tax law that there will no longer be a need for human labor. Assurance services, particularly financial statement audit services, are also threatened. Artificial intelligence can already perform the analytical procedures that consume much of an audit team's time. Additionally, artificial intelligence can perform these procedures on the entire population of transactions; human auditors can only take a sample of transactions (Ovaska-Few).

Artificial intelligence may also be able to accurately predict industry trends, which may disrupt PwC's advisory service line. If machines are able to more accurately predict trends, could they possibly make better advisory decisions than humans someday?

PwC, along with most public accounting firms, regardless of size, recognizes the looming threat of artificial intelligence software. Many have found ways to turn this threat into an opportunity. For example, with regard to financial audit/assurance services, PwC now actively looks for basic programming and big data analytics skills among its current and future employees (Ovaska-Few). PwC believes that instead of attempting to resist the change that artificial intelligence brings, the talent of the future needs to be able to effectively use the artificial intelligence tools provided.

Additionally, PwC is using artificial technology to improve the quality of an audit. Artificial intelligence software can perform basic analytical procedures at a faster rate than humans. Therefore, PwC uses artificial intelligence to carry out these basic tasks, which frees up the human auditor's time to accomplish a more in-depth investigation of the financial statements and their implications (Ovaska-Few). This results in a more comprehensive audit, which

provides more accurate and advanced assurance to the client and its stakeholders. Instead of ignoring the threat of artificial intelligence, PwC, like many accounting firms, has embraced it and turned it into an opportunity to provide higher-quality services.

What are the opportunities and threats?

Artificial intelligence has endless possibilities. The practicality of these systems will transform the world that we know today. Doing general jobs such as enhancing efficiency, making faster decisions, medical applications, education, and agriculture will become simpler and likely require less maintenance (Girishmahajan, 2018). These technologies will also be applied to our lifestyles in forms of technology that we use in our homes and in ways that commute and receive services.

There's no doubt that AI will be able to change the world for the better, but there is some anxiety surrounding possibilities involving this technology. The cost of creating these complex machines is very expensive, particularly the intricate and complicated software and hardware. Many businesses will try to hop on the trend of AI, and it could potentially replace jobs, especially those that require little attention and high levels of repetition.

Another major factor in regard to these devices pertains to their inability to think outside of the box. The machines are made for specific functions and tasks, so it can be difficult to see anything remarkable happening on a day-to-day basis. There are also concerns about addiction, exploitation, and self-modification of the devices that would potentially lead to harm. A common threat that is considered when AI is discussed surrounds the idea of the technology being too smart and finding ways to overcomplicate human processes or even cause devastation. However, these are all concerns that can be addressed and maintained by human practicality and ethical judgment.

What actions should companies take, and how urgent are the issues?

As we know, times are changing and have been changing in terms of business. When it comes to the giants of certain industries, some adapt to the change and work well with it, and others continue to avoid change altogether. This is vital in some cases, such as Blockbuster, once at the top of the food chain, is now completely out of the picture due to changes like streaming.

Actions companies can take could be strategic in being the first to the party in some new technological or simple way, or it could be from simply keeping up with the competition and their actions. Amazon is a fantastic company that practices this with how they are implementing Artificial intelligence in their services and products as well as Tesla. Amazon is now supporting a new service called “Amazon Ai Services” with their AWS to develop a faster machine learning database to streamline data allocation and storage (Marr, 2018). Tesla is introducing AI that could start up the idea of driverless cars from a thought to reality. This could be groundbreaking in how they can increase safety with this AI. Companies like Amazon and Tesla are setting great examples of how the right actions can lead to your company jumping to the top in your market.

When it comes to the overall urgency, you would say that companies should be as urgent as possible to change and strive to be the first to be there in terms of great improvements using things such as technology. Thus leaving your competition always playing ‘catch-up’ with your company, leaving you always one step ahead. Companies late to the party do have an advantage in terms of not spending the money on an idea that might fall flat when it comes to changes. However, that minor advantage does not keep up with the advantage companies like Amazon and Tesla have as of now, so urgency is key.

Pick at least one company and actions it may be taking in terms of attacking existing companies and outline its success or potential failure. Examples are Tesla, Airbnb, Uber, Amazon, Apple, Netflix.

Artificial Intelligence is undeniably the trend of the business future, and several companies have learned quickly how to harness the power of machine learning. Machine learning helps these firms grasp consumer behavior and actively create suggestions to improve the customer experience. In particular, AirBnb has done an excellent job creating continuity between their Artificial Intelligence advances and their large search pool of home offerings for customers. What makes AirBnB's job so difficult is that each one of their listings for homes or locations is "unique" while containing different advantages and pain points for clients (Halder, 2018).

There are so many differentiating characteristics for living spaces, like location, price, amenities, and so much more; this makes it difficult for a human user to be able to program the desires of hundreds of thousands of customers on a yearly basis around the globe. Of course, AirBnB has designed Artificial Intelligence capabilities that can assess large amounts of data per customer to help refine their results for preferences. What makes their process so inventive is how they are able to take these results and combine them with the results of listings available by their hosts. Both of these processes require a vast amount of data and narrowing this data down to one "perfect match." More specifically, AirBnb has designed a system that targets the idea of Neural Networks, which, in layman's terms, computers the process of matching both users with their inputs. (Haldar, 2018).

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