

## Artificial Intelligence: Threat or Opportunity

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### ABSTRACT

Artificial Intelligence (AI) has become the latest boom in the technology world and within a short span of time it has changed the way of working anything that is linked to life of a human being e.g. education, employment, economy, communication network, warfare, privacy, security, healthcare, ethics etc. However, the goal of artificial intelligence research is to create an artificial general intelligence (AGI), which can do any intellectual task that the human mind can perform. Despite its user-friendly software, AGI can be very harmful to humans. It may control human economic development, market processes, security policy issues and it can exploit the sources of humanity. Scientists have warned that right after the creation of an AGI, self-recursive super-intelligence AI will soon emerge, which will be an entity beyond the capabilities and performance of the smartest person ever. Chat bots could possibly reduce the need for customer service representatives but on the other hand, complex programming requirements and artificial intelligence would lead to more job creation for data science analytics and service delivery to customers. AI is an opportunity more than threat in every sector.

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### INTRODUCTION

According to the latest technology it is very essential to understand what Artificial Intelligence (AI) is and how exactly it works. As per the definition of AI in Oxford dictionary, Artificial Intelligence is intelligence exhibited by machines. In computer science, it is perceived that machine which is created by human is intelligent enough to adapt itself to the environment and take the appropriate actions that maximizes its chances of success at some goal. Thus, when a machine understands and acts like a human being e.g. learning, planning, reasoning, problem-solving, decisions making, understand the environment and adapting accordingly, also processing as per the languages required etc., then it falls under the category of Artificial Intelligence [1, 2].

In spite of the way that we are depending on Artificial Intelligence as the following apparatus to change the manner in which we live, work and communicate with each other - which will be for the most part empowered by machine-learning procedures – it stays vague regarding how these intelligent agents will take care of more intricate issues than the ones existing today (e.g. poverty, Epidemics, atmosphere changes) while remembering that the cutting edge in AI today is to brilliantly perceive pictures and insightfully playing amusements [3].

If we additionally take a gander at the current circumstance and who is associated with riding the influxes of advance in Artificial Intelligence, at that point one can

without much of a stretch find enormous ventures like Google, Facebook, Microsoft, and IBM are the ones who are huge players in the field. The advancement in AI is likewise bringing unfaltering outcomes e.g. annihilating employments by the methods for work computerization, one such situation can be found in the Industry 4.0 framework, which is these days being used in the automobile business. Industry 4.0 makes what has been known as a 'brilliant industrial facility' wherein vast number of robots take forward the entire assembling process with the assistance of cyber-physical frameworks, IOT and cloud computing.

## LITERATURE REVIEW

The development of Artificial Intelligence has been very much recent, tracing its origins to the mid-20th century. Even though its origins are very recent, still there exist few influences which have contributed greatly, in fact indirectly, to the visualization of AI. The beginning of AI is the contributions of various academic fields, which is not only limited to history, art, philosophy, logic and mathematics but much more than that. This segment seeks to identify some of those factors, which is in addition to provide a historical account of the remarkable breakthroughs in the AI's evolution [4–6]

## AI and Big Data

Today AI is highly relying towards the collection, usage and processing of big data.

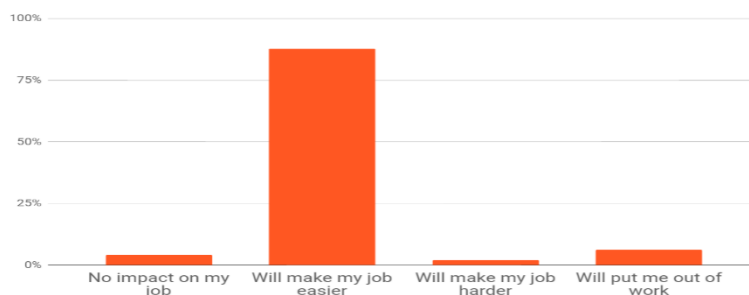
In this manner of accelerating their learning procedure it has been seen that how people think and feel the data is invaluable in AI gadgets, said by Bernard Marr. It is cyclic in nature – more the information more the process is, more data that the system gives, the more it learns and ultimately it becomes more accurate. As per the Marr's opinion shown in Figure 1, earlier AI's growth was restricted due to two reasons:

- The availability of data set is very limited;
- Instead of real-time, real-life data their nature is as sample data sets.

AI has transitioned into a data-first approach because of its greater availability of real-time data with the increasing ability to process huge amount of it in seconds.

Marr's argument has been agreed by Randy Bean, noting that the sources of data which is available in greater volume enables the capability in AI and machine learning that remains dormant for decades because of the shortage of data availability, limited sample sizes, and inability to analyse massive amounts of data in milliseconds. The Big Data is now empowering AI in three critical ways which are given as follows:

WHAT IMPACT WILL AI HAVE ON YOUR JOB IN 10 YEARS TIME?



Source: Cien's Global Study on the Future of Sales, September 2017 (n=120)

Cien

**Fig. 1.** Impact of AI on the Job in 10 Years' time.

- Big data technology: Immense amounts of information that already required costly equipment and programming would now be able to be effortlessly prepared; additionally, alluded to as "product parallelism."
- Availability of large data sets: New types of information, for example, ICR, translation, voice and picture data, climate data, and logistics data are currently progressively accessible.
- Machine learning at scale: "Scaled up" algorithms, for example, intermittent neural network systems and deep learning are controlling the leap forward of AI [7–9].

The author concludes with the perception that while the principal wave of big data was about speed and adaptability, the following will be tied in with utilizing the intensity of AI and machine learning on how to convey business esteem at scale.

The report of the White House's Committee on Technology credits three elements for the present wave of advance in AI, all identified with data:

- the accessibility of big data from sources including e-commerce, organizations, social media, science, and government;
- which gave crude material to significantly enhanced machine learning methodologies and algorithms;
- Which in turn depended on the abilities of more powerful PCs.

Recent work done in AI has transform the concentration with the data turning into the creatively new support attention to this algorithm was prior supported behind which the computer science rotated, like Russell and Norvig. In fact, Banko and Brill concluded, utilizing through an experiment, that an unremarkable algorithm with 100 million words of unlabelled training data beats the best-known algorithm with 1 million words. Similarly, Hays and Efros

could exhibit a similar principle utilizing photographs, concluding that the increasing accuracy of the algorithm was straightforwardly relative to the measure of information fed into it.

On the other hand, distinguishing regions where deep learning would require further exploration to manage a few issues observed in big data analytics. These incorporate figuring out what volume of info data is essential for valuable representation from deep learning algorithms and characterizing the criteria for acquiring great information deliberations and representation.

The AI of today, in this way, appears to be extremely unique to its ancestors. With the quantity of modifications to the technology and its relating capacities throughout the years, there may be some vulnerability on the significance and structure of AI, which the following area tries to inspect [10].

## **BUSINESS OPPORTUNITIES**

Organizations are indicating expanded enthusiasm for AI because of their restricted data processing abilities and business needs. The explosive growth in organized and unorganized data, the accessibility of innovation like cloud computing and machine learning algorithm, mounting pressure from new rivalry, expanded control, and soaring consumer desires have made an ideal tempest for expanded utilization of AI in the financial services industry.

The advantages of AI exhibits in the banking segment are varied, reaching out to operations, compliance, customer experience, product delivery, marketing, and risk management to give some examples. Abruptly, banking institutions can work with expansive volumes of historical data for every choice taken. For sure, the present astounding advances may turn out to be tomorrow's norm.

In any case, it remains a risk to the accessibility of low-ability roles for people to play. With this, BPO organizations wander into merging machine and HR in performing low-aperture employments. For instance, human help in chat services can simply take after if the Chatbot fails to address a request. In fact, machines can help individuals for a speedier conveyance of tasks however not thoroughly replace them now.

Nonetheless, with AI continually developing, it is feasible for an opportunity to come where low-aperture employments will never again require human intervention. Consequently, a possibility of a move towards the services demanded from BPO organizations winds up higher. Soon, entrepreneurs will swing to BPOs to play out their centre business functions, altering low-capacity jobs with mid-or high-aperture occupations or generally called Knowledge Process Outsourcing (KPO).

#### Utilization of AI:

- **To Detect Fraud:** AI is capable for recognizing fake action continuously and distinguishing the following example of suspicious conduct.
- **To Meet Regulatory Requirements:** Technology can be utilized to guarantee that regulatory prerequisites are met, and data is kept up with ongoing monitoring. This makes it less demanding to get any abnormalities ahead of time.
- **To Improve the Client Experience:** AI empowers people to use helpful and extensive knowledge as respects customer behaviour, for instance, and in this way make speedier, more brilliant decisions. A few connections with customers are straightforwardly encouraged by new voice technology or virtual assistants (Chatbots), while different applications are utilized

behind the scenes to strengthen marketing communications.

- **To Deepen Client Engagement:** It makes customized and astute items and services, because of new functionalities, more intuitive interactions (utilizing speech recognition, for instance), and warning capacities like personal financial management.
- **To Execute Investment Strategies:** Financial advisors' work is likewise advancing. Machines will take care of executing and keeping up investment strategies created after some time by the advisors to construct models. Advisors will then convey the data got with their customers.
- **To Facilitate Data Processing:** Although many strategic leaders draw quality from their sharp instinct, diligent work and long years of industry experience, a lot of this knowledge is basically gathered from a more profound comprehension of historically difficult and expensive to process data. AI will facilitate and accelerate this procedure. Very soon it will have the capacity to enable people to push back their handling limitations.

AI will in the long run mechanize monotonous, high-volume undertakings, at a lower cost. It will likewise encourage banks and credit unions deal with their regulatory burden and consistence issues, generate audit trails, and report suspicious behaviours. AI will even have the capacity to anticipate client benefit issues and sales demands. At last, AI technology will empower financial service co-ops to focus on high-value exercises and inventive customer experience solutions [11–13].

#### QUESTIONNAIRE

##### **1. Will Artificial Intelligence really become a threat to humanity?**

The exceptionally antagonistic and apparently irresponsible comments from Jack Ma founder of Alibaba around AI and its probability of making a third World War

– will have done little to motivate trust in those that harbor fears around the subject of smart machines. For a few, the two words put together start a feeling of fear, anxiety or even dread. For others, it speaks to the start of an energizing new digital world with untold advantages and opportunities. Unfortunately, be that as it may, it's regularly the previous, which seems to seep more into individuals' awareness. It's maybe then of little surprise that in an recent study by the British Science Association (BSA) that 36% of respondents trust that AI will in the long run takeover or wreck humankind [6].

## 2. How can we take care of security issue in AI?

AI methods are beginning to be connected to the analysis of secure PC frameworks and ideally, their utilization will enhance the utility of security investigation and confirmation. On the opposite side of the coin, more research is expected to address the security ramifications of AI frameworks. Design, confirmation, and examination methods are required for master frameworks and frameworks with learning components, and these strategies ought to be created now, not after the frameworks are handled.

## 3. AI: the challenge to keep it safe

When training image identifiers, AI scientists can't duplicate this present reality of the world. They teach systems what's in store by encouraging them training data, for example, photos, PC generated pictures, real video and recreated video, however these training situations can never catch the chaos of the physical world. In machine learning (ML), image identifiers figure out how to spot objects by drawing bounding boxes around them and giving them labels. And keeping in mind that this training procedure succeeds in basic conditions, it gets confused rapidly.

It's easy to characterize the individual on the left, yet how might you draw a bounding box around the individual on the right? Would you just include the visible parts of his body, or likewise his hidden torso and legs? These distinctions may appear to be trivial, however they point to a basic issue in object recognition: rarely there is a single best way to define an object.

As this second image illustrates, this present reality is rarely obvious, and the "right" answer is normally ambiguous. However, when ML systems utilize training data to build up their understating of the world, they frequently neglect to reflect this. Instead of perceiving vulnerability and ambiguity, these systems confidently approach new circumstances no uniquely in contrast to their training data, which can put the humans and systems in danger [8].

## CONCLUSION

AI is at the centre of another undertaking to construct computational models of intelligence. The essential presumption is that intelligence (human or something else) can be addressed the extent that image structures and tasks which can be modified in a digital PC's. There is much discussion with reference to whether such a programmed PC would be a brain, or would only mimic one, however AI specialists require not to wait for the conclusion to that discussion, nor for the hypothetical PC that could display all of human intelligence. Aspects of intelligent behaviour, for example, making inferences, solving problems, learning, and understanding language, have just been coded as computer programs, and inside exceptionally restricted domains, such as identifying diseases of soybean plants, AI projects can beat human experts.

Parts of intelligent behaviour, for instance, making inductions, solving problem, learning, and understanding dialect, have

quite recently been coded as PC programs, and inside astoundingly limited domains, for example, recognizing diseases of soybean plants, human experts can be beaten by this AI projects. Now the great challenge of AI is to discover ways for representing the common sense, knowledge and experience that empower individuals to complete everyday activities, for example, holding a colossal discussion, or finding their way along a busy street. Conventional digital PCs may be prepared for running such projects, or we may need to grow new machines that can bolster the multifaceted nature of human idea.<sup>9</sup>

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