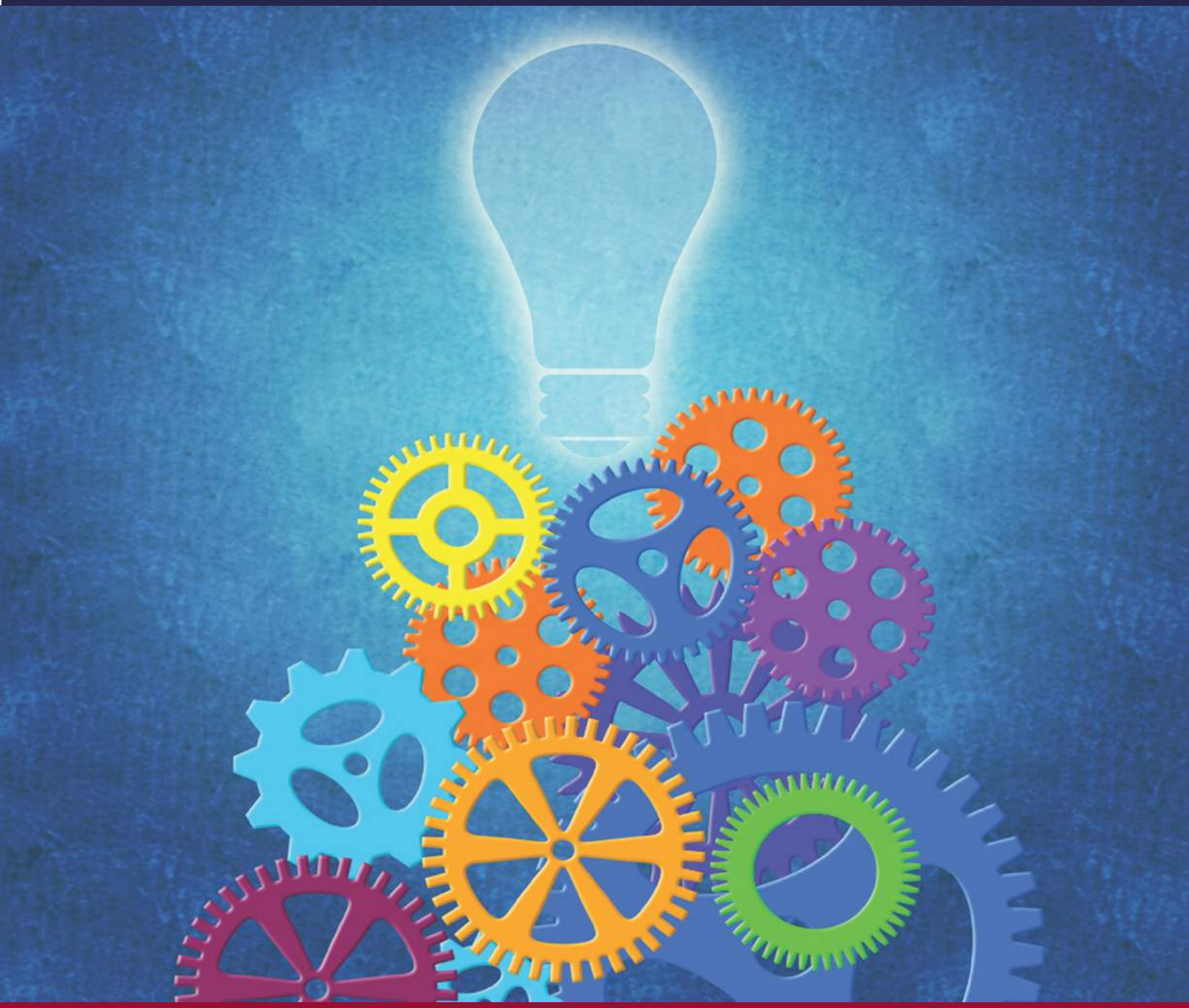
Artificial Intelligence: A Layman's Introduction



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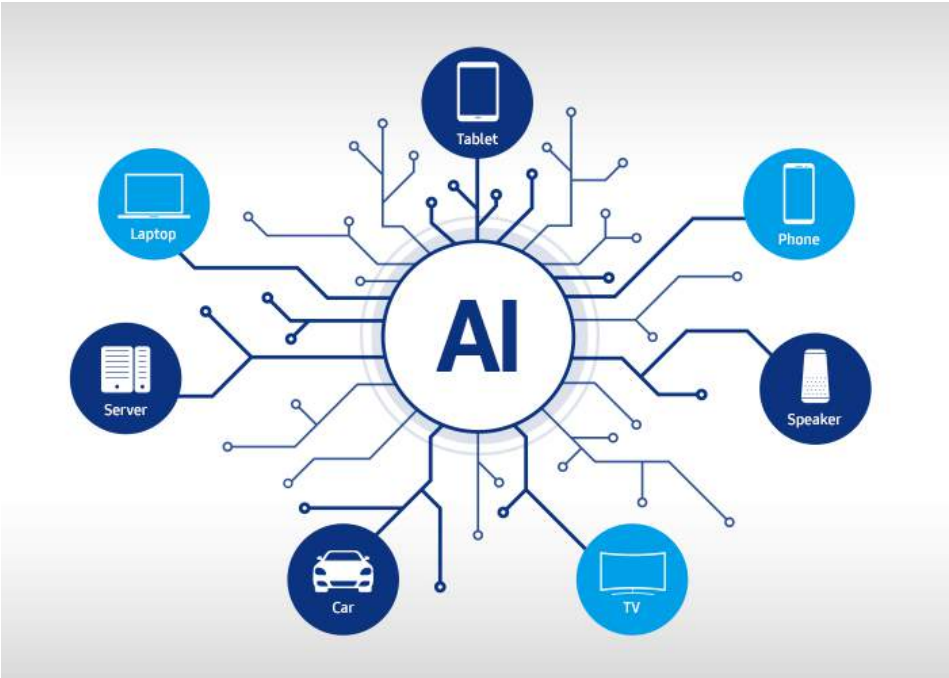
1. INTRODUCTION

Introduction to AI

It is sometimes hard making sense of a concept like machine intelligence that has a place in both abstract and applications domains and spans both Engineering and Science. There has been a lot of curious inquiries on the most basic definition and explanations on this constantly evolving field. This article is just us, goofing around, in an attempt to answer some of the questions many have asked about the field of artificial intelligence; through presenting a layman's summary of a machine that can think and act with the intelligence that it has been programmed with, and by doing so, completely emulate a human being. Happy Reading!

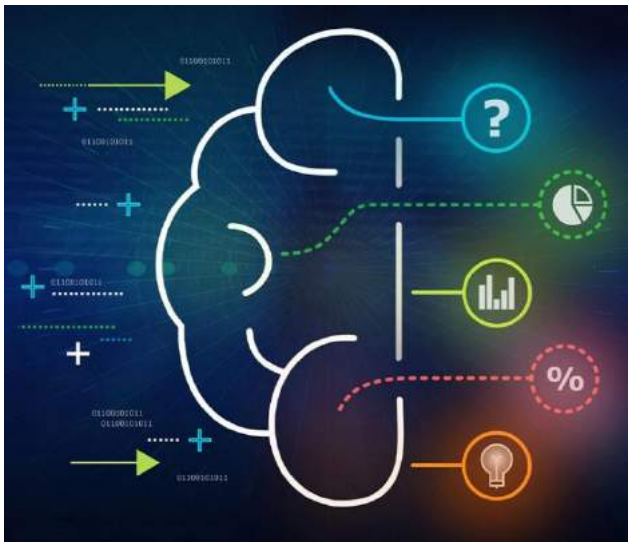
1.2 Artificial Intelligence (AI)

Artificial Intelligence (AI) is a concept and technology that has gained much significance globally, even though lacking much familiarity. A study carried out by Deloitte in 2017 indicated that only 17 percent of individuals living in the US were familiar with AI technology. However, AI has found wide applications in various fields, such as finance, transport, healthcare, and security. Its significance has been attributed to its qualities such as adaptability, Intelligence, and intentionality. AI relies much on data and therefore guided by the policies and regulations concerning obtaining and use of data. Even though AI has been identified to be important, technology has been criticized for causing a high rate of unemployment. In this article, we discuss Artificial Intelligence in terms of its quality, application, policies, and ethical issues; and how the future world will be with AI technologies.



2. Artificial Intelligence Qualities

Artificial Intelligence technologies function in a unique way different from other technologies in that they respond to stimulus consistency with human responses, therefore, solving problems that usually need human intervention. In this case, they function in an adaptive, intentional, and intelligent manner.



2.1 Adaptability

In making decisions and providing solutions to different problems, AI systems learn and adapt. With the use of algorithms, sensors, and other hardware, AI systems are able to collect information, interpret and automatically learn from the features or patterns contained in the data, therefore, adapting to it (West & Allen, 2018). For instance, semi-autonomous vehicles using AI can relay information to drivers on the traffic impediments ahead, including traffic jams, potholes, or accidents.

2.2 Intentionality

Unlike the passive machine that makes predetermined responses, the AI algorithm uses real-time data to make decisions. AI systems collect information from different sources, instantly analyze it, and act on the insights obtained from the data. AI currently has the ability to make sophisticated analysis and decision-making capabilities due to improved analytical techniques, storage systems, and processing speed.

2.3 Intelligence

Artificial Intelligence incorporates both data analytics and machine learning. Machine learning analyzes data to identify a trend specific to given practical information. Using the machine learning knowledge, AI analyzes issues specific to the practical problem or information identified.

3. Application

Artificial Intelligence has found a growing role in the economy, therefore, being applied, integrated, and applied in different sectors. AI technology was estimated by Price Waterhouse Coopers to raise the global GDP by 14%, an equivalent of $15.7 trillion by the year 2030 (West & Allen, 2018). AI, therefore, has widely been applied in finance, health care, security, and transportation sectors.

3.1 Finance

In finance, artificial Intelligence has been applied in banking automation, reporting and analysis, enriching transaction data, predictive analytics, and managing customers using chatbots. AI has been applied in developing the algorithm that automates banking services, therefore, increasing efficiency and productivity and minimizing human biases and errors (Deloitte, 2020). With the ability to incorporate machine learning and data analytics, AI has been applied in analyzing the consumers' trends in using banking services and making recommendations for banks' decision-making. Banks and their customers have been able to understand their expenditure and the services or goods spend on due to the ability of AI to decipher hard-to-understand data into easily readable information. AI deciphers strings in transaction details into readable texts that can easily be understood by both banks and customers. Banks and customers are able to make decisions based on predictive analytics on the future performance of the financial sector (Barasch, 2018). AI technologies have been applied in developing forecasting tools essential in predictive analysis for the financial sector. Lastly, AI has been applied to creating chatbots that are installed on the companies' websites to interact with customers and help them with solutions such as opening a bank account.

3.2 Security

AI has been applied by the American military in creating project Marven, which sifts through surveillance captured videos and data to detect any abnormalities and therefore alerting the security officers on suspicious activities (West & Allen, 2018).

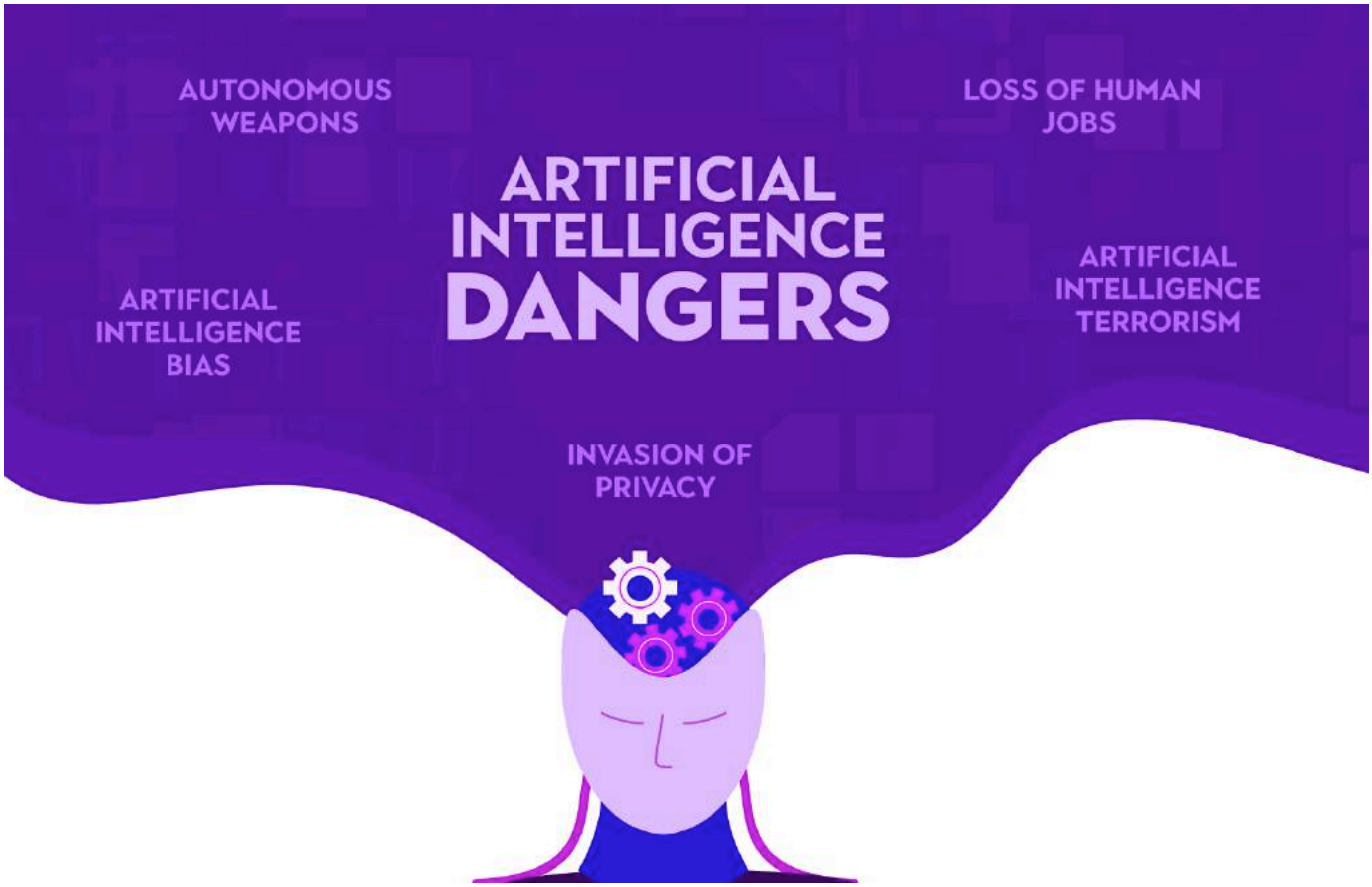
3.3 Transport

Major innovations of AI have been centered on the transportation sector. More than $80 billion was spent in the design and creation of autonomous vehicle technology between 2014 and 2017 (West & Allen, 2018). The AI knowledge has been applied in creating autonomous vehicles and drone delivery systems with automated braking and guidance, and lane changing system. In addition to automation, AI has used sensors and cameras to guide oncoming vehicles and obstacles to avoid a collision.

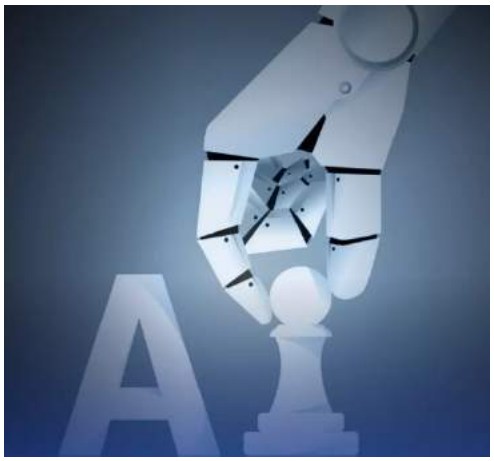
4. Policies and Regulations and Ethical Issues

Artificial Intelligence heavily relies on data. Obtaining and use of data globally is guided by set rules and regulations. Since AI requires real-time data for its success, countries with policies supporting open sources and sharing for data have likely experienced much success in AI than countries with policies barring open data sources and sharing. In using AI, companies and organizations are required not to develop algorithms that support biases and discrimination (West & Allen, 2018). For instance, facial recognition software should not be created with an AI algorithm to differentiate users by race. This can be a basis for discrimination in delivering services.

Different ethical issues have arisen as a result of the development of AI technologies. AI has been criticized for its likelihood of causing a high rate of unemployment. The concern is based on the fact that AI technologies are replacing human beings in their workplace due to their abilities to perform human tasks. AI technology has also been criticized due to its ability to create autonomous weapons meant to kill. Even though the intention of creating such weapons is for security, it's feared that its impact can be devastating if they land in the hands of wrong persons.



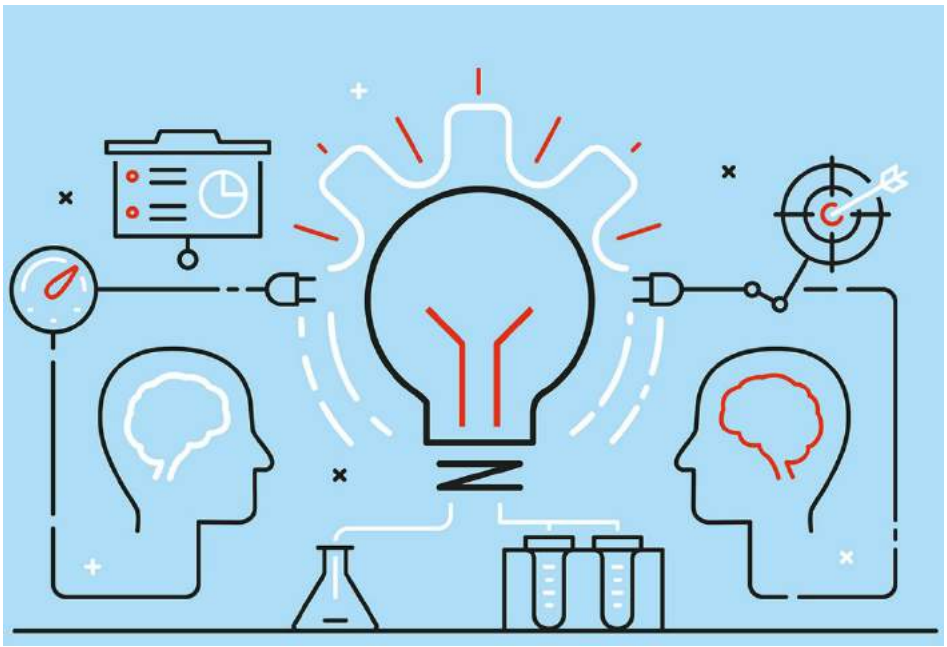
5. The Future with Artificial Intelligence



With the increasing development of AI technology, the future is likely to have a transportation sector dominated by autonomous cars; robots perform basic human tasks in the manufacturing sector, such as assembling, predictive analysis and stacking; and patients getting more personalized in health care. Besides, AI is likely to be relied on in assessing and understanding a student's ability to understand education concepts and customer services, mainly being managed by AI innovations such as the Chabot.

6. Final Thoughts

Artificial Intelligence is an important technology based on its quality and applications. The technology has been identified to contain the good qualities of intentionality, adaptability, and Intelligence. These qualities have made AI an important technology in improving efficiency in various sectors such as finance, transport, healthcare, and security. Even though the technology has widely been used in the economy, it is being guided by the policies of obtaining and using data. The significance of AI has more weight compared to the ethical issues arising from its use. This is because of the efficiency and increased productivity that the technology has brought about. Therefore, it is worth to conclude that AI is transforming the world into a better position.



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