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AI AND ETHICS OF AI

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1 Introduction to AI

Artificial intelligence is an ability to create intelligent machines or software programs that mimic the characteristics of the human mind, such as thought, problem solving, planning, optimum choice, sensory perceptions etc. Capacity to outperform human behavior in information exploration artificial intelligence approaches has drawn the attention of companies and research organizations around the world and this area of research has been a witness of quick progress over the last two decades. In this introduction, let us move forward in depth to AI article. Example of artificial intelligent are opening phone with face id, use of social media, google search. Smart home devices so on.

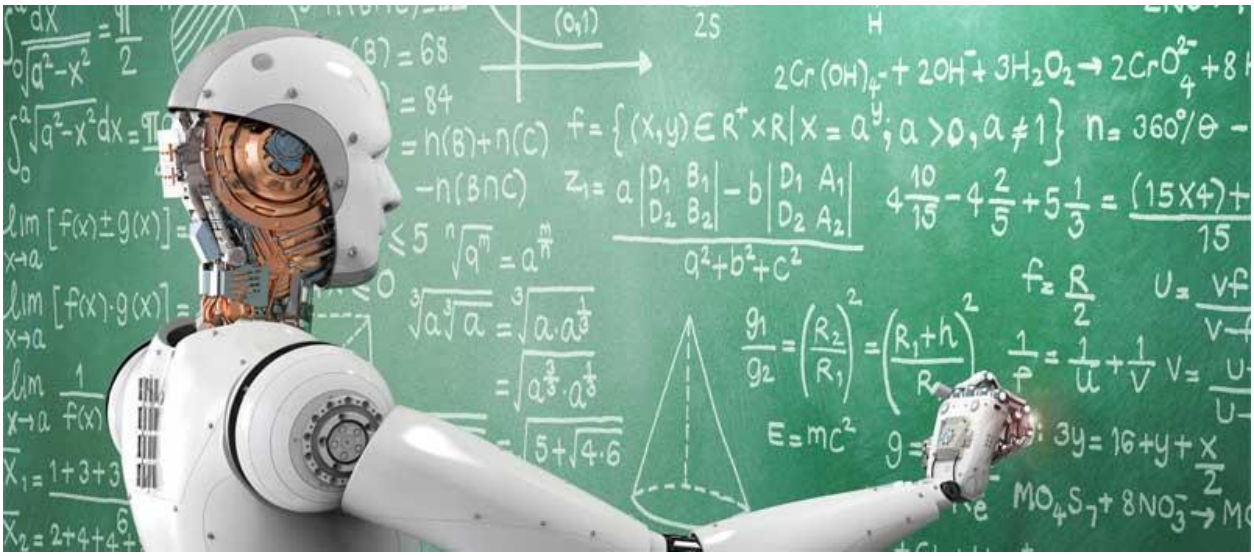

Figure 1: Example of Balancing AI's power with examiners' experience (UCLES, 2021).

AI is necessary for the machine to consider various potential positions in strategic games based on deep knowledge. Chess, crossing of river, problems with the N-queens, etc. Some AI-based speech recognition systems can hear, express, and understand what they mean when a person communicates with them. Siri and Google Assistant are same famous example of AI (Selvamanikkam, 2018).

1.1 The key components of artificial intelligence.

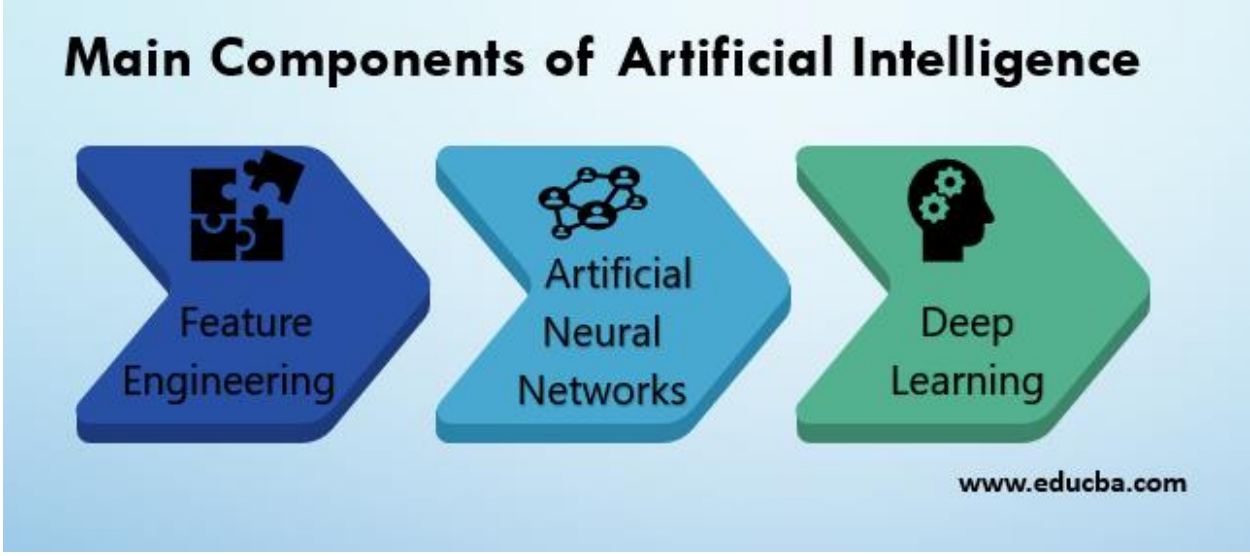

Figure 2: Main parts of the AI

1.1.1. Feature Engineering.

Function extraction is the method of defining a limited number of informative features or attributes of the given data set. By properly selecting significant features, the efficiency of machine learning processes can be enhanced.

1.1.2. Artificial Neural Networks

There are weighted ties between the computer nodes set at consecutive levels in a Neural Network. The optimal link weights in the learning process are deduced by changing them in accordance with the common weight share strategy and the feedback obtained from the retrograde propagation algorithm. The weighted total of values propagated to their input is theoretically determined by each node. Activation functions monitor the criterion for determined values to be forwarded to the next layer. After several cycles, weights and other network parameters converge to ideal values that end with mo. The world wide commonly used Neural Networks are:

- Concentrate the obtained input to classify features at the convolution layer with the learnt spatial filters/patterns. These signals are transmitted to the next layers completely linked to recognition tasks.

- The intensity of convolution in localization variations effectively distinguishes or marks the features and is commonly used in imaging applications.

1.1.3. Deep Learning

In contrast to artificial neural networks, deep learning architecture has hidden layers between the input- and output layers. This architectural adjustment enables the deep learning environment to automatically extract characteristics and to learn classifications. These models use well-labeled datasets with supervised learning. Despite the inherent architectural complexity of several hidden layers, the model can significantly reduce learning time by using high-performance parallel computer GPUs (EDUCBA, 2021).

2. Background

The AI ethics and robotics are also concentrated on different forms of "concerns," usually responding to emerging technologies. Most of these fears appear to be very uncommon (trains are too fast for the souls). Others seem unlikely when they say that technology will essentially transform people (phones kill personal contact, writing is going to destroy memory, video cassettes will make things redundant).

The origins of modern AI can be traced back to the attempts of traditional philosophers to characterize human thoughts as a symbolic system. However, the AI sector had not been officially developed until 1956, when the word "artificial intelligence" was coined at a conference at Dartmouth College in Hanover, in New Hampshire (Anyoha, 2017).

2.1. History of AI

In 1956, at the Dartmouth conference, the definition of "artificial intelligence" In 1997, Kasparov beat the IBM supercomputer Deep Blue. 2016 In AlphaGo, a deep learning firm from Google artificial intelligence programmed. The world champions Li Shashi, beat DeepMind. The artificial intelligence sector then Applications like financial robotics,

driverless, speech and face recognition continue to grow. In the nation Training has also made a significant milestone in the application of artificial intelligence. Robot Ada questioned the college entrance during the 2017 college review Mathematics test, detailed

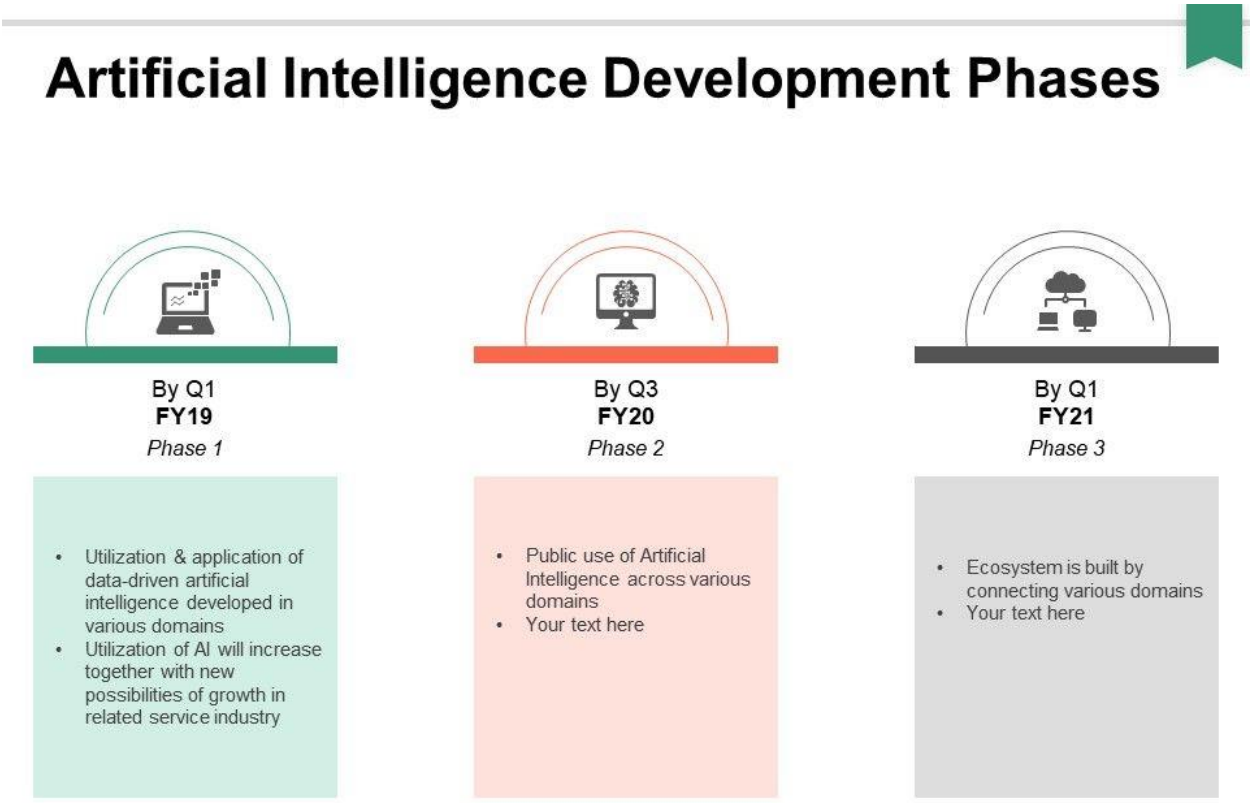

Figure 3: Picture of Development phase of AI (SlideTeam, 2021).

2.1.1. Development of AI.

English artificial intelligence is Artificial Intelligence, known as AI. As for the Artificial intelligence definition, there has been no unified opinion at home and abroad. It does, however, function. Artificial intelligence is commonly considered to be about the intelligent conduct of objects, particularly in diverse environments perception, thought, understanding, communication and behavior. Artificial intelligence can be divided into

three groups, based on the intensity of the feature, namely "weak intelligence artificial, strong intelligence artificial, super artificial intelligence. "Three phases have been taken to develop artificial intelligence. In the first step, knowledge expressions such as proposal logic and predicate logic and heuristic search algorithms were introduced predominantly in the 1960s. In the 1970s, the second stage was. The step 3 started at the end of the 20th century and began to enter the era of big data and self-learning cognitive intelligence in about 2006. In 2006 the artificial intelligence began to break through, with the slow improvement of the computational power of semiconductor technology. The rapid growth of the Internet has led to an increase in the scenarios for the application of artificial intelligence and major breakthroughs in the deep learning algorithms have been achieved (Press, 2019).

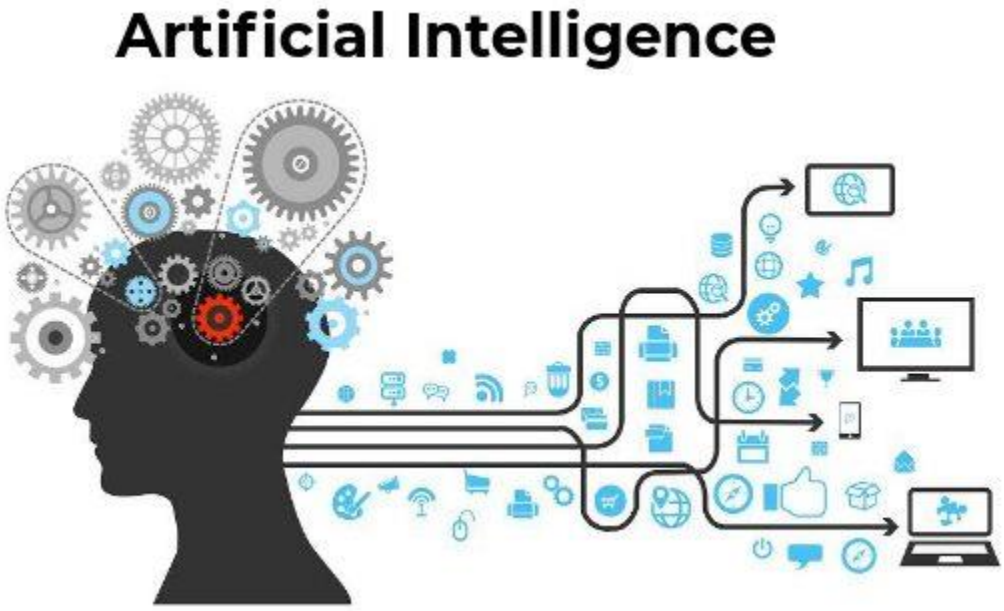

Figure 4: Life cycle of AI (devteam, 2020).

2.2. Ethics of AI

Logistics optimization, fraud detection, composition, analysis, and translation: Smart machine systems improve our lives. Our planet becomes more effective, and therefore richer, when such systems are more capable. Tech giants like Amazon, Alphabet, Facebook, IBM, and Microsoft – and individuals like Stephen Hawking and Elon Musk – think it's time to talk about the practically infinite artificial-intelligence environment. This is

as much a new boundary in ethics and risk management as it is in digital technology in many respects. But what problems and talks hold AI experts up overnight?

Figure 5:Picture of Ethics vs AI (singularity2030, 2021).

2.2.1. Unemployment

The workplace hierarchy mainly concerns automation. We have created ways for people to take on more complex roles by inventing new ways to automate jobs from the physical work which dominated the pre-Industrial world to the cognitive labor which characterizes our globalized global society's strategic and administrative work. Look at trucking: millions of people are still employed alone in the United States. What if Tesla's Elon Musk self-drive trucks become widely available in the next decade? What will happen with them?

Here we come to the question of how we spend our time. Many people still depend on time to sell themselves and their families to have ample income. This opportunity can only be hoped for, in non-work activities, people will be able to find significance, like caring for family members, involvement with community members and new ways to contribute to human society. If this transformation succeeds, one day we could look back and assume it was barbaric that people had to sell much of their waking time just to survive.

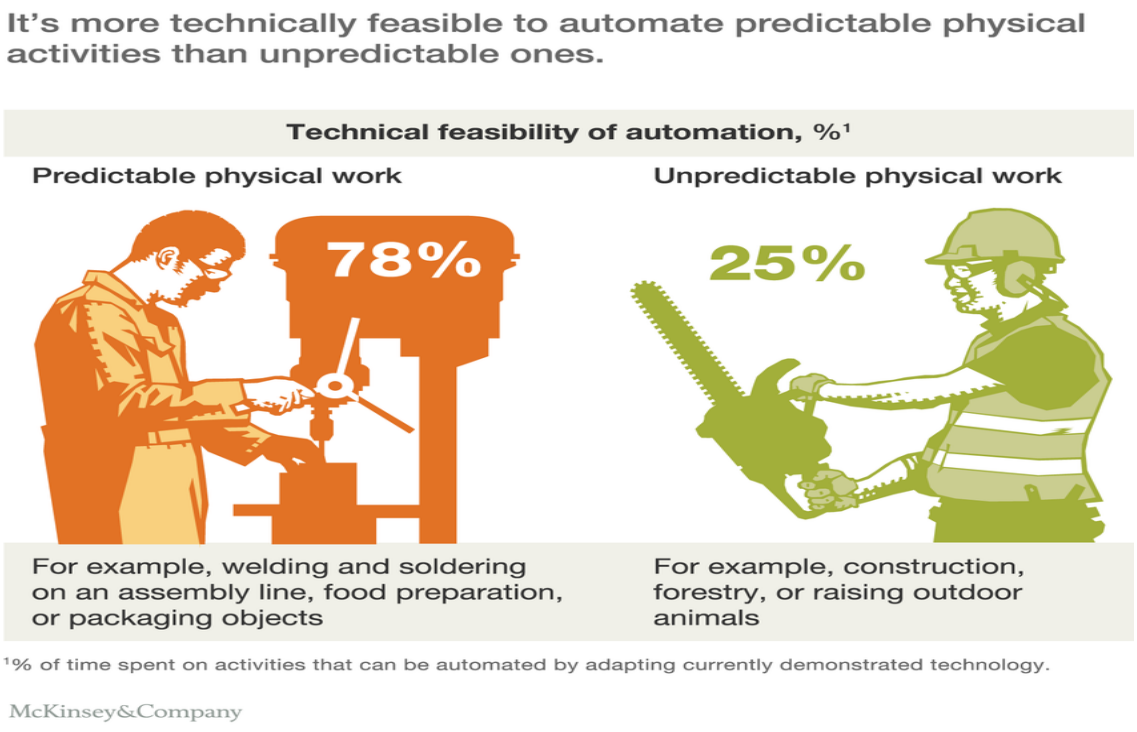

Figure 6: Technical feasibility of automation

2.2.2. Inequality

Our economic structure is focused on incentives for economic contribution, mostly measured on an hourly salary. In terms of goods and services, most businesses still rely on hourly jobs. However, a corporation will dramatically reduce the use of artificial intelligence to rely on humans, which means that income is reduced to less people. Therefore, people who own a company powered by AI will benefit all the capital. We are now seeing a growing rich gap, in order to bring home a large share of the economic surplus that start-up founders make. The three largest companies in Detroit reported approximately the same revenues in 2014. And the three major companies in Detroit and the three largest firms in Silicon Valley produced approximately the same revenues. There were 10 times less staff in Silicon Valley alone.

2.2.3. Humanity

Artificially intelligent interactions and partnerships are getting better and better. The Turing Challenge was won in 2015 by a bot called Eugene Gottman. Humans used text feedback to communicate with an unknown individual in this challenge and then guessed whether it was talking with a human being or a computer. In assuming they talked to a human being, Eugene Gottman misled more than half of the human raters.

This landmark is just the beginning of an age when we deal with machinery constantly as human beings, whether in customer service or in sales. Since people have only minimal attention and kindness towards another human, artificial bots can channel practically infinite resources into relationship-building.

2.2.4. Artificial stupidity

If you're a person or a machine, wisdom comes from learning. Systems typically have a period of training in which they "learn" to detect and to follow information. When a system is completely trained, the system can then be checked and we can see how it works.

Clearly all possible examples that a system can address in the real world cannot be covered in the training process. These structures can be deluded in ways that people are not. For instance, random dot patterns can result in a computer "seeing" things not available. If we depend on AI to get us into a new world of work, protection, and effectiveness, we must ensure that the system performs well.

2.2.5. Singularity

Human beings are at the top of the food chain and it is not due to sharp muscles or teeth. Our naiveté and wisdom are almost wholly responsible for human superiority. Build, create, and use tools to control animals: both physical instruments as cages and arms and cognitive tools such as education and conditioning can be improved, faster and more strongly.

This raises a serious question concerning artificial intelligence: will it have the same advantage against us one day? We cannot rely on "pulling the plug" because a well-developed machine can anticipate and defend itself. Some call this "singularity": the moment when people are no longer the most intelligent beings on earth. (World Economic Forum, 2021).

3. Conclusion

The national policy and social and economic growth are served by technical education. It must face the challenges and possibilities generated by artificial intelligence and transform and grow actively. Artificial intellect and artificial intelligence are important to learn how to nurture highly qualified foreign talents to respond to the needs and achievements of rising society. Artificial intelligence and technology have always been of interest and unexpected concern to us with new concepts, subjects, inventions, goods, etc. There are also many significant attempts to enter the stage and compete on the market, such as the robot they show in the TV, which are yet to be introduced as the films portraying it (i.e. the intelligent robots). However, secret ventures and industrial enterprise growth.

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