STRATEGIC PLANING OF AI RESEARCH THROUGH ANALYSIS OF ECONOMIC AND SOCIAL IMPACT ON 4TH WAVE

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Abstract - In the new future of AI era, Asia, where labor and security are important, is given priority, followed by the United States, where gig jobs are diversified, and Europe, which has a strong tradition. With regard to artificial intelligence and autonomous vehicles, although AI is very encouraging by emphasizing opportunities, AI's impact on work is a destructive opportunity, and in terms of improving quality of life, it can be a manageable and highly positive destruction have. Increasing the commercialization of the next generation convergence of AI technologies with STEM (science, technology, engineering, mathematics) can keep the AI economy from falling behind.

Index Terms - AI, Social-impact, Blockchain, 4th-wave.

I. INTRODUCTION

There is reviwed that the analysis of the impact of AI technology on the industry, and establish effective AI research strategy. First, when it comes to analysis of the impact of AI technology on the industry. The 'Fourth Industrial Revolution', which has emerged as the hot topic of our economy and society in recent years, will greatly change the role, structure and scope of existing manufacturing and service industries based on the development of intelligent information technology. In evaluating the impact of new science and technology on the economy, society, culture, ethics, and environment in advance, and reflecting the results in the policy, policy considerations to maximize positive impacts and minimize negative impacts and aims at deriving a desirable change direction from the beginning of the establishment. To this end, it is necessary to prepare countermeasures through the participation of society members in the results of new technologies, and to enhance the social acceptance by raising the understanding of the people's science and technology policy, thereby promoting the social responsibility of science and technology It plays a role. First, the other is what establish effective AI research strategy, already in the background of everyday life, a variety of artificial intelligence works in the form of intelligent algorithms, making human life more convenient and enriching. For example, high-performance algorithms are used in many smart services, such as introducing friends on Facebook, recommending personalized merchandise from Amazon, recommending Netflix or YouTube videos, introducing match.com's dating candidates, and navigating to navigation destinations. In these areas, the development and improvement of algorithms has become a source of new corporate competitiveness.

II. MARKET RESEARCH FIELDS

A. Socicial Stage

There is of the impact of AI technology on the industry as following things. The Cognitive industry throughout its distinguished career in a field littered with hype cycles, All has opted to respond with healthy skepticism to the typical breathless and enthusiastic pronouncements regarding the latest new new thing. This time around, its lets-look-at-reality approach is aimed at tempering the hype around the negative implications of artificial intelligence.

Some are changing of international research trends in AI technology (including the US, Europe, Japan and other leading countries). First, in order to analysis of global industry status of AI technology, they are making of AI discrimination and characterization of global companies and laboratories and Strategic analysis of global leading companies and research institutes. It however, is at a minimal level with AI status of Korean companies and research institutes.
More expansion is required of research status, industrial application status, university, elementary, middle school, human resource development status and strategy analysis.However, When it comes to analysis of economic and social impacts, the more analysis of economic status of global companies and advanced countries. To compare it of Economic Impact of Korea, It can analysis of social status of global companies and advanced countries.The real world of US companies adopting the latest advances in AI, were 3 types of cognitive projects. First, Robotics and cognitive automation (44% of the projects surveyed) performing digital task transferring (e.g., replacing lost credit or ATM cards without human intervention). Second, Cognitive insights (48%), delivering granular insights, detecting patterns (e.g., identifying credit/claims fraud in real-time at banks and insurance companies). Third, Cognitive engagement (8%), interacting with customers and employees (e.g., virtual digital assistants for customer service).The fastest growing AI applications today are those that are most prosaic, observed Davenport. With the two that mentioned, Robotic Process Automation and using machine learning for data integration, it is probably easier than

with other AI applications to quantify or demonstrate the benefits to the business. To be concrete some analysis of economic and social impact of AI in Korea,it has to establish AI technology research strategy and AI application formulation, make social characteristics and cooperation strategy of AI technology, establishment strategy of AI industry activation, also turnto strategies to train AI series.
Establishing social characteristics is cooperation strategy of AI technology.

B. Economic stage

Regardless of scienctipic innovation, Analysis of cost Research of human convergence If itneed to analyze the impact of AI technology on the industry. Fourth industry is sure to affect various aspects of industry and our lives. Germany, EU, USA and Japan are pursuing research direction, research contents and research method in various forms at national level. Aboutthe international aspects of AI technology, the sales of the three major IT companies, Amazon, Gul and Microsoft, are much higher than the exports of Italy, which has high technology in Europe.
This situation has been stated in the EU report for 2016.The European Union has been shocked and selected strategies for priority implementation of the European Union, what countries should prioritize, and what to do first in each country. Most of these strategies are aimed at industrialization, economic revival, social infrastructure building and job creation based on IT industry, especially artificial intelligence. In particular, studies on artificial intelligence in the United States, Europe and Japan have been conducted far in advance of Korea, and there are many researchers. In Korea, the IT hardware infrastructure is very good, but the software needs a lot of development.
The more core artificial intelligence research of the 4th industry requires a thorough strategy as a latecomer, starting late due to limited human resources (research personnel, lack of human resources). In case of Hungary, research has been carried out far ahead of Korea.Therefore, specialized companies using researchers, researchers, and AI are also active (although IT companies and foundations are far behind in Korea). Hungary is also actively responding by establishing IT4 strategy.
It isnecessity in the current situation in Korea. Prior to the advent of the Alpha High in 2016, Korea lacked awareness of artificial intelligence and therefore lacked strategic, social impact, and economic analysis.
At a time, the future department announced the research investment and direction of artificial intelligence, but the detailed strategy, economic and social effect of the artificial intelligence did not have time. In particular, the economic ripple effect in academia, private sector, industry. Therefore, it is very difficult to establish a strategy as well as research on human resource development, academic linkage, importance of research results

III. ANALYSIS OF COST RESEARCH OF HUMAN CONVERGENCE

1. analyze cost of the impact of AI technology on 4th industry wave
Parnas(2017) insists that verifiable algorithms are preferable to heuristics. Devices that use heuristics to create the illusion of intelligence present a risk we should not accept.
What traditional industries need to worry about because of the development of a shared economy is not 'job cuts' but 'income reduction' because of efficiency and weaker competitiveness.
2. International sharing economy aspects of AI technology
In the world, when the unmanned mart like Amazon-go is universalized, the job of 'cashier' disappears. Only one has predicted that AI (Artificial Intelligence) would be confused by violence and takeovers in USA, UK, Sweden, Germany, and Korea, China, Taiwan, Japan.
<table 1>AI perspective

ratio	Benefits / Creative destruction	ratio
▲37%	▲more helpful to human beings in medical and scientific fields	▲30%
	▲Reduction or change of human jobs	
▲29%	▲Putting robots in simple labor and dangerous work	▲20%
	▲Controlling our life by machines	
ratio	Benefits / Creative destruction	ratio
▲19%	▲Reduced business costs to lead to better service and price cuts	▲18%
	▲Increase in the possibility of sharing personal information and online disclosure	
▲11%	▲Reduced possibility of human accidents and mistakes	▲12%
	▲Decrease in human opportunities / loss of self-esteem / Social issues such as too much free time	
▲5%	▲More free time	▲11%
	▲The possibility that machines will develop independently and have the ability to think for themselves	
	▲tendency to establish relationships with machines rather than humans	▲9%

In the fourth industrial age, a cooperative economy is a broader concept than a sharing economy, formed by connected markets, manpower, and technology that include and exchange services. AI will connect and evolve it. First, it is Commercialization costs. second, the convergence cost. Third, a big data cost.
For example, can I use AI electric cars throughout the cold winter? Is it possible to create standardization linked to IoT Smart Cities, and can CBCC, which is expanding by blockchain, control the interest of central banks? Currently, Sweden and Estonia are

active. Sweden's central bank issues e-krona of AI? It is likely to be issued for the first time in Europe, but it is difficult to commercialize it easily. This is problematic because it can not make monetary policy difficult to adjust interest rates. There is also the risk of encryption assets. In the other way, BIG data is a big problem for companies to use big data due to trial and error. In terms of data collection, manufacturing marketing and environmental safety data are only partly collected because most of the factors are not observable.

In addition, R&D (design) data is difficult to quantify because of the low value of existing data, unstructured (drawing, design know-how), and physical (collision, wind vibrations, heat, electromagnetic wave, lifetimes). The cost of the experiment is also high and it is difficult to give a meaningful analysis result. The focus of current artificial intelligence research should be "artificial intelligence-based automation", which is not super-intelligent AI, but is matched to on-site data (data) and MATLAB. So how do we learn to machine uncertainties of observational and non-observational factors related to dynamic steady state? This is a remaining task to prepare for artificial intelligence that is robust and practical.

In the end, the AI system will reduce cost and strengthen security with a block chain.

A. Technical aspects between AI and Blockchain

The results of this study can be used as essential for the 4th Revolution Industrial Strategy, rather than simple research results, it aims to improve the economic, social, and international status of Korea.The data obtained based on this is open for industrial use various big data can be obtained and used.Block Chain and AI are obviouslytwo technological trends, and when they collapse, there is a further possibility of innovation and at the same time weakening their rights. Both playing a role in strengthening each other and provide better supervision and accountability opportunities between humanities and AI.Due to the unique encryption of the file system, the data stored in the blockchain is inherently very secure.

This means that the blockchain is ideal for storing very sensitive personal data that can make it life's value and convenience very high in intelligent processing. Consider an intelligent healthcare system that performs accurate diagnostics based solely on our medical scans and records, or purchases recommendations and recommendation engines recommended by Amazon Go, Amazon's revolutionary “grab-and-go” grocery store and movie Netflix. Although AI offers great advantages in many areas, its practicality is strictly limited unless AI is trusted by the public.

Documenting the decision-making process in the blockchain is a step in achieving transparency and insight into robot thinking, which is necessary to gain public confidence.

B. Economic efficiency of Autonomous drivingand Security

First, the data provided to these systems is very personal. Because the data one collect from others after he browse or interact with the service.

The company that handles it must invest a lot of money to meet the standards expected from a data security perspective. Despite this, large-scale data breaches that lead to the loss of personal data are becoming more common. The blockchain database stores information in an encrypted state. This means that all data on the chain is secure and the private key must be kept secure several kilobytes of data. In terms of security, artificial intelligence can be well integrated into the desktop. A new area of AI involves constructing algorithms that can process (process or process) data while in an encrypted state. Reducing these events will help make things safer because any part of the data processing, including the release of unencrypted data, poses a security risk. It is aimed at the utilization of the strategy and the purpose of the project. They export and promote to be influential in the development of industry and opening of data in order to utilize industry and research, greatly contributing to economic effect.

Blockchain will help people track, understand and interpret decisions made by AI. Artificial intelligence decisions can be difficult to understand. This is because you can evaluate many independent variables and keeping learning the important variables of the overall task one are trying to achieve. AI can manage blockchains more efficiently than humans or traditional computers or auto systems. Traditionally, computers in cars are very fast, but they are ridiculous. If there is no clear indication of how to perform the task, the computer in cars cannot perform the task. Because of its encryption nature, this means it requires a lot of computing power to manipulate blockchain data on stupid computers. For example, a hash algorithm for small blocks on an automatically blockchain uses a powerfulapproach. Artificial intelligence tries to get rid of this brute force approach and manage tasks in a smarter and more thoughtful way. Human experts who crack code think about how to better and more effectively crack code so that we can successfully crack more code in their careers. Machine learning mining algorithms will work in a similar way. However, if you enter the correct training data, you can modify it as soon as you become an expert.

C. Social impact between humanities and AI

It is very effective in getting social consent in the importance and necessity of AI. Utilizing artificial intelligence as a basis and Utilizing AI in various fields and network, it is aimed at practicality beyond research in the laboratory.

As an example, it is expected that AI algorithms are increasingly used to determine whether a financial transaction is fraudulent and needs to be blocked or investigated. But for some time, we need to review these decisions to ensure the accuracy of people. In addition, considering a large amount of data, this can be a complex task. For example, Wal-Mart sends transaction data to the AI system of each store for a few months. If it is decided to record each data point in the blockchain in the database, the record in the information recorded with the recorded information has not been tampered with, and the confidence of the review process.

CONCLUSION

As AI expands, social structure and economic paradigm gradually become more empathic things.First, it is drawing a practical agreement in 4th wave. According to the direction of investment concentration in the ICT convergence era, the IT-oriented AI industry change of more than 50% should increase the innovation industry to the convergence area of AI market that is aiming at innovation and consumption, not a simple production base of multinational companies. In the current convergence market of logistics distribution, it is necessary to study the consumption route of the region for the commercialization of the AI convergence industry while the growth of investment expectation is recovering.Second, it is Leading Strategy. AI In the process of uncertain investment, regional AI-based job investment is important for economies of scale. It is important to cooperate with countries in the US, Europe, and Korea through cooperation. It is required to invest in a humanities-based convergence investment,which is led by the ecosystem of convergence with an active AI, not the base of the base.

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