GLIMPSE OF FUTURE ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON HUMAN LIFESTYLE

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ABSTRACT

This paper is compilation of our survey work, analysis and understanding of transformation happening around the world and how human lifestyle is reforming with it. Modern AI is reinforcing several other technologies as underlying architecture to enhance their performance level. It also cover how AI is satisfying human expectations in web search, designing, music composition, complex brain cancer operation, self-driving car, personal assistant and playing against human. With modern AI computing becomes much better as compared with past computing and operation. It also includes factors that are empowering and nurturing the roots of artificial intelligence to develop and grow faster. Along with it draws light on some challenges still AI is facing to overcome and some futuristic threat that might be happen.

In a nut shell this paper covers modern AI, future AI and its impact on human lifestyle. As now artificial intelligence is flourishing in every technical field and shaping human lifestyle.

Keywords :-*Artificial Intelligence, Machine learning, Future lifestyle, Cognitive computing, Big data*.

1.Introduction

Our objective behind this survey is to gather information about current ongoing researches and opportunities in this vibrant field of Artificial intelligence. John McCarthy[1] coined the term "Artificial intelligence" in way back 1956 then and now AI has made significant improvements and also developed as a prominent area of future technology. At that time he defined it as 'the science and engineering of making intelligent machines'. Our study includes Artificial intelligence in current world and its influence on people, community, and society. How AI enabled computing systems are changing our lifestyle now and how they will change in future. In it we are summarizing most of undergoing and upcoming transformation in Business (Marketing, Customer Assistance, and Advertisement), Healthcare, Search Engine Optimization[4], Transportation, Jobs[2], and Education system by Artificial Intelligence. In fact we can't see presence of AI in various fields around us without proper knowledge of it. Everything seems changing and behaving more like human, machines started suggesting text patterns, products and music, recognizing voice, translating videos into text without any human intervention. It is just like a fastest vehicle for us to move towards future where unimaginable opportunities are awaiting for us.

Why Ai Is Growing Now?

As every plant grows only when it gets required conditions and favorable environment to nurture it properly. And what we have in last few years are best suitable environment for AI, rapid growth in mobile technology, computing systems, availability of internet and availability of huge date sets as big data. Now we have IoT devices with powerful sensors,

high quality data capturing capability and data display systems. Large cloud storage for harvested data from thousands of IoT devices, powerful CPUs (Central Processing Unit), and GPUs (Graphics Processing Unit) to process them online. Also availability of AI compatible mobile devices and network connection to connect them with best data transfer rate. Big data a huge source of data to train current machines and most important curiosity of 21st century human, all these factors are responsible for AI explosion.

Machine Learning

The shiniest gem that AI has now is machine learning, capability of learning things from experience just like humans. Every discipline in Science, Mathematics, Business, Media, Medical, And Security and many more are working together to integrate it. Modern virtual keyboard on android device and PCs are powered by machine learning algorithms to predict possible next words and auto text completion. Machine learning also enables a machine to draw some useful conclusion from given data on basis of their pre defined labels, category, property and classify them according to it. It also works with contents where labels are not available and machine has to decide how to classify them. It is now composing music for songs, stylish futuristic dress for designers, painting patterns and models for future equipments. CEO's, Business leaders and business executives are now turning their interest towards it. Machine Learning is again subdivided into supervised, unsupervised and reinforcement learning.

On 11th of June, 1997, IBM's computer 'Deep Blue', defeated Garry Kasparove, the world's greatest Chess Player And on May of 2017, Google, Deep Mind's, Alpha Go "Master" took on Ke Jie, the world's highest ranked Go player. Gaming experience[13] is also enhance and one of the imaginative area that exploiting the ability of Artificial intelligence with maximum. It makes games attractive, addictive, and realistic. Today we can play multiplayer games with computers and computers are getting so smart that they are able to beat real human champions.

Improved Cyber Security

Artificial intelligence will also control hacking, resource overloading or DOS attack, identify terrorism and racism supporting contents and websites. Social sites like YouTube, twitter, and Facebook are using powerful intelligence systems to engage and amuse users with best possible contents and features. Network analyst and researchers are using it for developing better security protocols and intrusion detection/prevention systems. Next generation smart home[15] will have Artificial intelligence enabled devices, music systems, and fully automatic security camera with image detection.

Self-Driving Car

Top automobile companies like Tesla, BMW, Audi, are investing huge amount of their business funds in machine learning, for development of driver less vehicles. Very soon it will be possible to have own car that doesn't need driver, drives with human accuracy and even better with traffic rules. So future is free from rush driving and accidents cause due to traffic rule violation. According to Google, Waymo safety report 2017 [10], 94% of U.S. car crash involve human error, it will reduce drunk and drive case, and also stop senior citizens from taking risk of driving. Save productive time wasted in traffic, an average 42 hours per person each year. Also you don't need to worry about who will drive your car when you are not under age of driving license or don't want to drive or not in condition to drive home your car will itself take care of it. Indeed this will reduce driver job opportunities for humans and also problematic in some emergency or urgency because they have limitation on violation of traffic rules. And they can't override it on just passenger's request. But they may have some special protocols for emergency situation where we need to drive little outside from normal driving pattern. BMW's futuristic motorcycle Vision Next 100[6] equipped with powerful AI with self-balancing

mechanism for balancing during riding and standing. Smart "Digital Companion" to assist rider during ride with best possible suggestion to make journey experience smooth and safe. "The Visor" specially designed glasses with state-of-art technology and controlled by eye movements provides continuous feedback about road condition during ride.

Augmented Reality (Ar)

Augmented reality[5] allows user to integrate 3D virtual objects into a real 3D world environment in real time. AI combines with AR to provide much rich platform for virtual reality and real time information processing on objects around us. This pair has power to make non-living things alive and more informative. Specifically both are suitable to each other one can project things in real time and another can capture, analyze, process data in real time.

Robots And Humanoids

Sophia[11], a human like social humanoid robot developed by Hanson Robotics, Hong Kong. Sophia can communicate as like human and response to general questions. In October 2017 Sophia becomes the first robot to receive citizenship of Saudi Arabia or any country And in November 2017, Sophia becomes first non-human to have United Nations title as the United Nations Development Programme's first ever innovation Champion. Pepper[12] is a humanoid robot manufactured by Softbank Robotics, specialty about pepper is it can read human emotions [3] and response according to it.

Business And Ai Market

Even non-tech business companies have realized the strength and capability of modern AI. They are incorporating it for better performance and future business. Marketers are using it to connect with more customers and engaging them with their services for better and high rated customer satisfaction. The revolution that AI brings in business is affecting every kind of business model and size of business. Modern AI tools like chat bots, Virtual customer assistant[2], and personal assistants are rebinding the relationship between company and customer. In future AI will nurture business roots with his amazing data collecting, data processing, data understanding, and predicting capabilities. Visionary people are adopting it because they know that this is not just today's technology it is technology that powers future[7]. Here we have future AI market predicting graph from statista.com which shows how fast AI market is growing.

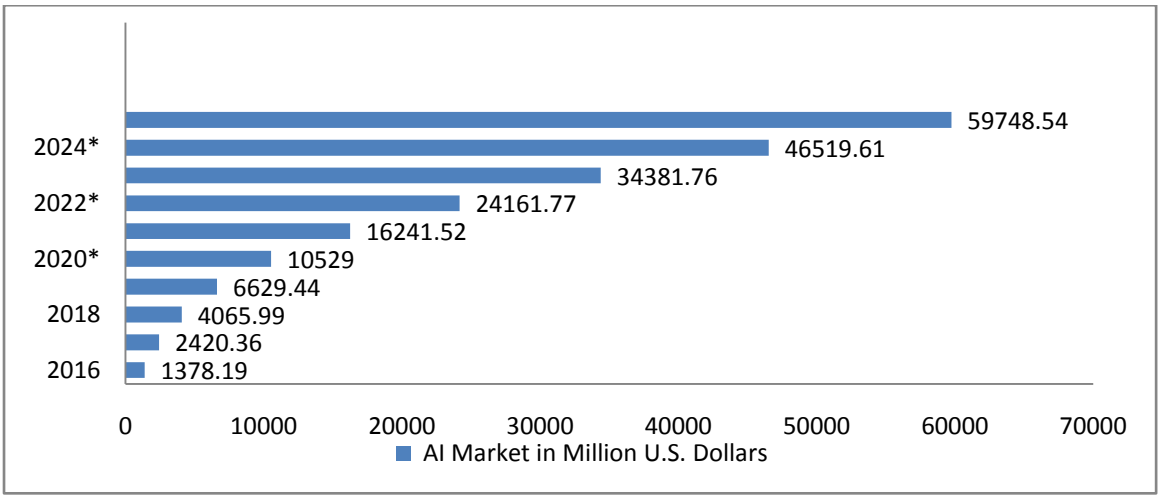

Figure 1. AI market growth forecast in future.

Artificial Intelligence systems are also reforming retail store[7]. shopping better and simpler. As retail stores are essential part of our daily life it can be found in every city, village and shopping malls. Intelligence systems are automating billing,

item information, stock management, Supply chain, generating seals report and even rewiring vending machines for better retail store management.

Artificial Intelligence In Education (Aied)

With AIED [14] Traditional classroom will become more interactive and it will also reform learning models for students. It can assist each student in one-to-one session and also keep track of students learning. Thanks to IBM AI team for achieving 5.5% error rate in speech recognition which is another millstone, that will enable future personal assistants like Siri, Alexa, Google assistant, and cortana to hear you more clearly.

Artificial Intelligence In Medical

Artificial Neural Network the brain of AI getting complex and complicated day by day to solve multi disciplinary problems like pattern recognition and image processing. This is now effectively implemented in different kinds of cancer diagnosis and several other major health issues. Medical Science, Biotechnology, Genetic Engineering, and Nanotechnology such fields are also implementing machine learning for effective simulation and better experimental environment.

Artificial Intelligence In Behavioral Biometrics

Artificial Intelligence has the capability to monitor and understand the pattern of mouse movement, keyboard operation, browsing pattern to verify the user authenticity. It can also learn driving pattern applying break, speed, and turning indications to identify the driver by creating a pattern of his regular behavior. It will reduce car and vehicle theft and robbery.

Doubts Regarding Artificial Intelligence

Most common threat that people have in their mind is AI will take over humans[9]. Job opportunities will reduce with increase in use of intelligent bots, robots and assistants. As it's a technology and what if it is used against us as a weapon, automatic identity theft, automatic Dos attacker, security breakdown and it will be more dangerous when combine with psychological social engineering. Fear from AI technology is obvious and absolutely it's normal, we are ruling this planet is just because no other living creature or non-living thing has intelligence level like us so far. And now they are rising from ground level of intelligence. We are now creating our own competitor or even better intelligent thing is surely alarming if we only see dark side of it. But if we look at bright side it is full of unimaginable possibilities, solutions for yet unanswered questions, and key to expend mankind in outer space. Recent doubt is about Gmail ready to go automatic email reply templates, which is good for quick reply but also raise a question about privacy that does Google reading our private mails?.

2.Conclusion

Indeed we are moving towards smart future vary fast and Artificial Intelligence has a big chunk of share in it. Scientist and researchers are working hard to make it even more significant but still we are far away from true intelligence and actual potential of AI. Super computers like IBM Watson were a baby steps towards building actual futuristic intelligence systems with powerful cognitive computing, machine learning, processing power, and Reasoning ability. AI is changing business rules and cutting unnecessary cost to maximize business profits. It also started managing customer driven economy well by satisfying customer with his intellectual answering capability and problem resolution ability. It is assisting in improving business quality, reducing human burden, providing better platforms for testing new products,

helping marketing executives to take better decision and also suggesting doctors with best results. In upcoming future AI will support almost every kind of technology as a core system from a morning coffee making machine to night lamp, health diagnosis systems to life support systems, pet robots and old age assistant for elders. Future is "AI era" where tools around us have ability to explain itself. It's nearly impossible to predict exact future as it is uncertain, we can only make possible predictions on basis of current evidence we have today. It is now part of our culture, our daily life style and it will be in future too with many more options.

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