Applications of Artificial Intelligence in Smart Hand Held Devices

Chow Kok Lin and Zalina Kamis

***Abstract*---**Artificial Intelligence (AI) makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks. Most AI examples that you hear about today – from chess-playing computers to self-driving cars – rely heavily on deep learning and natural language processing. Using these technologies, computers can be trained to accomplish specific tasks by processing large amounts of data and recognizing patterns in the data. With all the excitement and hype about AI that's "just around the corner"—self-driving cars, instant machine translation, etc.—it can be difficult to see how AI is affecting the lives of regular people from moment to moment. While Hollywood movies and science fiction novels depict AI as human-like robots that take over the world, the current evolution of AI technologies isn't that scary – or quite that smart. Instead, AI has evolved to provide many specific benefits in every industry. This paper provides a summary of applications for modern examples of artificial intelligence in health care, retail and more.

***Keywords*---**Artificial Intelligence, Speech Recognition, Human Interface

I. Introduction

ARTIFICIAL Intelligence is known as A.I. It is an approach to make a computer, a robot, or a product to think how elegant human think. Artificial Intelligence is a study of how human brain think, learn, decide and work, when it tries to resolve the problems. And lastly this study outputs intelligent software systems. Theint end of Artificial Intelligence is to develop computer functions which are connected to individual knowledge, such as, reasoning, learning, and problem-solving. It is a meadow that has a long history but is still persistently and agressivelyrising and altering.

II. Methodology

HISTORY:

Modern Artificial Intelligence was the creation of The Logic Theorist. Designed by Newell and Simon in 1955 it was considered the first AI program. The person who lastlycoin the term artificial intelligence and is regard as the father of Artificial Intelligence is John McCarthy The first phase of modern Artificial Intelligence can be traced to classical philosophers' attempt to depict human thinking as a symbolic system. But the field of Artificial Intelligence wasn't officially founded until 1956, at a conference at Dartmouth College, in Hanover, New Hampshire, where the period" artificial intelligence" was coin.

But achieving an artificially intelligent organism wasn't so easy. After some reports criticizing progress in Artificial Intelligence, government funding and interest in the field dropped off. After that the research began to pick up again in 1997, IBM's Deep Blue became the first computer to beat a chess champion when it defeated Russian grandmaster Garry Kasparov

The talking computer "Chabot" Eugene Goostman captured headlines for tricking judges into thinking he was real skin-and-blood human during a Turing test, a rivalry developed by British mathematician and computer scientist Alan Turing.

Turing test, -It wasdeveloped by Alan Turing in 1950. It is a test of a machine's capability to show intelligent behaviorcorresponding to, or identicalfrom, that of a human.

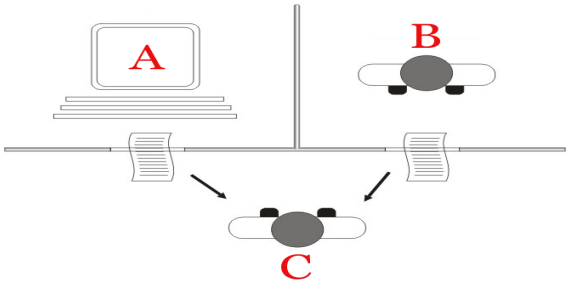

Fig. 1

DEFINITION OF AI:

Artificial Intelligence is the branch of computer sciences that emphasizes the development of intelligence machines, thinking and working like humans. For example, speech recognition, problem-solving, learning and planning.

A bough of computer science dealing with the imitation of intelligent manners in computers. And the potential of a machine to emulate intelligent human behavior.

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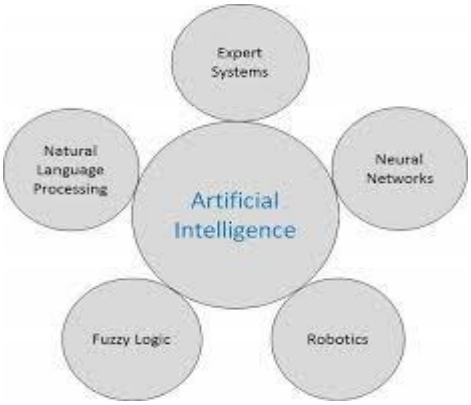

Fig. 2

III. APPLICATIONS OF AI:

1. AI IN GAMES:

Alpha Go is an Artificial Intelligence based machine developed by Google Deep Mind. It created the past in the modern months by defeating the world champion of Chinese antique board game Go. The world champion of board game, Lee sedol of South Korea was challenged by Google Deep Mind to five board game series in which Alpha Go defeated the champion by four to one. Alpha Go proved that machines can be made intelligent enough to conquer individual brain. They can be taught from the habitat and can forecast more precisely than a human brain can. They can make decision more speed, and precisely than what is expected from human mind.

2. EXPERT SYSTEM:

In A.I is an expert system is a computer system that imitates the decision-making ability of a human expert. Expert systems are planned to resolve compound problems by reasoning by bodies of comprehension, represented mainly as if then rules preferably than by excellence procedural code. The first expert systems were created in 1970s then proliferated in 1980s. Expert systems were among the first truly victorious forms of AI software. However, some experts point out that expert systems were not part of true artificial intelligence since they absence the ability to learn autonomously from outward data An expert system is divided into two subsystems: the reasoning engine and the comprehension base The comprehension base represents facts and regulation.

The reasoning engine applies the rules to the known facts to terminate new reality. Reasoning engines can also include clarification and debugging capabilities.

Fig. 3

A symbolic Lisp Machine: an early platform for expert systems.

3. VISION SYSTEM:

Computer Vision is the science and skill of obtaining models, meaning and organizestatistics from optical data. The two major fields of computer visualization are calculation optical and machine optical. Calculationoptical has to do with easily recording and analyzing the visual insight, and trying to recognize it. Machine vision has to do with using what is found from computational vision and applying to vision profit people, animals, and surroundings.

4. SPEECH RECOGNITION:

Speech recognition is the intercastigating sub field of calculation linguistics which develops approaches and technologies that enables the identifications and transfer of spoken language into text by computers. It's also known as electronic speech recognition, computer speech identification or speech to text. It incorporates comprehension and investigation in the linguistics, computer science, and electrical engineering fields.

Some speech recognition systems need training where a single speaker reads text or isolate lexicon into the system. The system analyzes the individual's specific voice and uses to fine tune the identification of that person's speech, resulting in increased correctness. Systems that don't use training known as speaker individualistic systems. Systems that use training known as speaker dependent.

Speech recognition applications include voice user interfaces such as voice dialing.

5. MILITARY:

Worldwide annual military spending on robotics from US$5.1 billion in 2010 to US$7.5 billion in 2015. Military drones competent of independent act are widely considered a helpful benefit. Many A.I. researchers seek to distance themselves from military applications of Artificial Intelligence.

6. AUDIT:

For financial statements audit, Artificial Intelligence makes continuous review possible. Artificial Intelligence tools could

examine many sets of different data immediately. The future benefit would be the overall review risk will be reduced, the level of guarantee will be increased and the time duration of review will be reduced.

7. ADVERTISING:

Advertising is possible to use Artificial Intelligence to forecast or generalize the behavior of customers from their digital footprints in order to target them with personalized promotions or build customer personas automatically. A documented case details that online gambling companies were using Artificial Intelligence to upgrade customer targeting.

Moreover, the application of Personality computing Artificial Intelligence models can help reducing the cost of advertising campaigns by adding psychological targeting to more conventional sociodemographic or behavioral targeting.

IV. CHALLENGES FOR AI:

1. BUILDING TRUST:

Artificial Intelligence is all related to science and algorithms, which lies on the scientific side. People who are completely ignorant of these algorithms and knowledge that lies at the back the working of A.I find it hard to understand the functioning.

Here how A.I can face confidence issues with humans, in spite of its capability to cut down on tasks. It is a basic human psychology that we often abandon something that we don't understand. We are humans tend to stay away from anything complex. And A.I being related to huge amount of data, data science and algorithms, there are times when users don't grip these ideas.

2. AI HUMAN INTERFACE:

The dare is the scarcity of data science knowledge within humans to get maximum output from A.I. As for the businesses, there is a scarcity of advanced talents. Business owners require to train their office workers to be able to leverage the benefits of this technology.

Statistics reveal that 55% of observe respondents perceive the biggest dare was changing scope of human jobs when everything will be automated.

3. SOFTWARE CRASH:

No technology or human is perfect. In case of software or hardware malfunctions, it is hard to put a finger on what went wrong. Rather, tasks performed by humans can be traced.

However, with machines and inbuilt algorithms in the picture, it is difficult to blame someone or find the cause of a software/hardware malfunction. A recent example of this is the self-driving cars that took the life of a walker.

V. PURPOSE OF AI:

The intended motive of artificial intelligence is to making an intelligent machine that initially thinks as good as a human, but eventually much better, even to the degree of superior.

It really depends on a lot of belongings, such as your beliefs, the society around you, and just how deep down the rabbit hole you can choose to go. There are two fold,

One is to use the power of computers to argument human thinking, just as we use motors to argument human or horse power. Robotics and expert systems are major branches of that.

The another one is to use a computers A.I to understand how human think. In a humanoid way. If you test your programs not merrely by what they can accomplish, but how they accomplish it, they you are really doing cognitive science; you are using artificial intelligence to understand the human mind.

1. AUTOMATED TRANSPORTATION:

We're already seeing the beginnings of self-driving cars, though the vehicles are currently required to have a driver present at the wheel for safety. Despite these exciting developments, the technology isn't perfect yet, and it will take a while for public acceptance to bring automated cars into widespread use. Google began testing a self-driving car in 2012, and since then, the U.S. Department of Transportation has released definitions of different levels of automation, with Google's car classified as the first level down from full automation. Other transportation methods are closer to full automation, such as buses and trains.

2. SOLVING CLIMATE CHANGE:

Solving climate change might seem like a tall order from a robot, but as Stuart Russell explains, machines have more access to data than one person ever could—storing a mind-boggling number of statistics. Using big data, AI could one day identify trends and use that information to come up with solutions to the world's biggest problems.

3. ROBOT AS FRIENDS:

Who wouldn't want a friend like C-3PO? At this stage, most robots are still emotionless and it's hard to picture a robot you could relate to. However, a company in Japan has made the first big steps toward a robot companion one who can understand and feel sensation. Introduced in 2014, "Pepper" the companion robot went on sale in 2015, with all 1,000 initial units selling out within a minute. The robot was programmed to study human sensation, develop its own emotions, and help its human friends stay happy. Pepper goes on sale in the U.S. in 2016, and more sophisticated friendly robots are sure to follow.

VI. FEATURE OF AI:

Looking at the features and it wide application we may definitely stick to A.I. seeing at the development of Artificial Intelligence, is it that the future world is becoming artificial.

Biotic Intellect is fixed, because it is an old, grown pattern, but the new pattern of non biotic calculation and intellect is growing exponentially.

The memory volume of the human brain is probably of the order of ten thousand million binary digits.

But most of this is probably used in remembering optical impressions, and other comparatively prodigal ways.

Hence we can say that as natural intellect is limited and volatile too worls may now depend upon computers for smooth working.

With A.I., the chances of error are almost nil and greater accuracy and exactness is achieved.

A.I finds applications in space exploration. Intellect robots can be used to discover space. They are machines and hence have the capability to endure the hostile atmosphere of the interplanetary space.

They can be made to adapt in such a way that planetary atmospheres do not affect their physical condition and functioning.

Intellect robots can be programmed to attain the Earth's nadirs. They can be used to excavate for fuels. They can be Fraud recognition in smart card-based systems is probable with the use of artificial intelligence. A.I is also employed by financial institutions and banks to organize and manage records.

Organizations use avatars that are digital subordinates who interrelate with the users, thus saving the require of human resources.

Sensations that often intercept rational thinking of a human being are not a hindrance for artificial thinkers.

Lacking the sensational side, robots can think logically and take the correct conclusions. Emotions are associated with moods that concern human efficiency. This is not the case with machines with A.I.

It can be utilized in carrying out recurring and time consuming tasks professionally.

Intellect machines can be employed to do certain risky tasks. They can regulate their parameters such as their fast and time, and be made to act fastly, unaffected by factors that affect humans.

When we play a computer game or operate a computer controlled bot, we are in fact interacting with A.I. In a game where the computer plays as our opponent, with the help of AI that the machine plans the game moves in reply to ours. Thus, gaming is among the most common examples of the merits of AI.

VII. Conclusion

A.I and Machine Learning are products of both science and myth. The perception truths expressed in Artificial Intelligence and Machine Learning systems are not new either. It may be better to view these technologies as the execution of mighty and long-established discernment propositions by engineering.

We must accept that there is a propensity to approach all important revolutions as a Rorschach test upon which we foist anxieties and aspiration about what compose a good or happy world. But the potential of Artificial Intelligence and machine intelligence for good does not lie exclusively, or even primarily, within its technologies. It lies mainly in its users. If we trust how our societies are currently being run then we have no reason not to trust ourselves to do good with these technologies. And if we can suspend presentism and accept that old stories warning us not to play God with powerful technologies are instructive then we will likely free ourselves from unnecessary anxiety about their use.

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