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Application of Artificial Intelligence and Its Future Aspects

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ABSTRACT

This paper concentrates on the meaning of artificial intelligence with its advantages and disadvantages. It also considers the current progress of this technology in the real world and discusses the applications of AI in the various fields like industries, gaming, aviation, weather forecasting, social media, cyber security etc. The paper concludes by analysing the future potential and effects of Artificial Intelligence. Artificial intelligence is concerned with making computers behave like humans which works more like human and in much less time than a human takes.
Keywords: Artificial Intelligence, Aviation, Gaming, Weather Forecasting, Cyber Security

I. INTRODUCTION

Artificial intelligence refers to the ability for computer technology to conduct a range of complex tasks for humans, it's rapidly becoming a part of everyday life. It is defined as intelligence exhibited by an artificial entity to solve complex problems and such a system is generally assumed to be a computer or machine. Intelligence is the ability to think, to imagine, creating, memorizing and understanding, recognizing patterns, making choices, adapting to change and learn from experience. Currently, there are a variety of apps that incorporate at least some elements of AI technology, from speech recognition apps to apps that can solve complex mathematical equations. However, the complexity of AI apps is continuing to evolve, and the future of AI apps will reveal some remarkable advancements.

From SIRI to self-driving cars, artificial intelligence is progressing rapidly. While science fiction often portrays AI as robots with human-like characteristics, AI can encompass anything from Google's search algorithms to IBM's Watson autonomous weapons.

Artificial Intelligence has identifiable roots in a number of older disciplines, particularly

- ✓ Philosophy
- ✓ Logic/Mathematics
- ✓ Computation
- ✓ Psychology/Cognitive Science
- ✓ Biology/Neuroscience

II. APPLICATIONS

Artificial intelligence today is properly known as narrow AI, in that it is designed to perform a narrow task, e.g. only facial recognition or only internet searches or only driving a car. However, the long-term goal of many researchers is to create strong AI. There are definite signs that machines with artificial intelligence will soon be taking over skilled manual work that now is typically handled by humans.

Some of the examples:

Google Will Pave the Way

Google is one of the most visionary technology companies. "OK Google" is a voice recognition app that enables users to surf the web hands-free, simply by talking into their device. In the future, Google will continue to advance this technology. Google's search engine relies on a complex algorithm, and when searching via voice, it renders results based on specific keywords.

However, they are now beginning to use a technology called RankBrain, which will rely on identifying patterns within human speech to return results based around the user's specific intentions, rather than their words alone. This is useful for people who pose complex queries without specific keywords, as the

speech recognition software will still be able to ascertain the types of search results the user really wants.

Improve Medical Care:
Technology has long played a vital role in the advancement of medical care. AI has the potential to greatly expedite this process and guarantee a higher level of precision, which is particularly essential in the medical field. The Walter Reed National Military Medical Center has already begun implementing AI technology to their benefit by using it to construct drawings of decision support tools for surgical care.
As robots enter the healthcare field, medical care will be more precise than ever.

Robots in Amazon:
Amazon already employs the use of robots in its fulfillment centers which are already highly automated and sophisticated, with robot workers that transport products between humans as endpoints in a finely tuned system.

Photo Organisation: Though it may seem one of the more trivial applications, it can save professional and laymen photographers a lot of time. Facebook has already implemented a degree of AI technology in their photos, enabling facial recognition to automatically identify people in photos based on previous photos of the individual.

The Roll is a newer app that expands on that idea. It can scan an entire photo library and automatically identify similarities between the photos, and then group them into their appropriate albums without any human intervention. It also can apply scores to each photo based on lighting and overall picture quality, which can help professional photographers to continually improve upon their art.

Weather Forecasting:
Neural networks are nowadays being used for predicting weather conditions. Past data is provided to the neural network, which then analyses the data for patterns and predicts the future weather conditions.

III. FUTURE ASPECTS OF AI

The use of artificial intelligence will lead to production of machines and computers, which are much more advanced than what we have today. Speech recognition systems will reach much higher levels of performance and will be able to communicate with humans, using both text and voice, in unstructured English. There will be a great future some day for expert system applications in all aspects of health care, in both clinical and administrative areas, in improving patient care and in allocation of financial, social, and other resources.

In the long term, an important question is what will happen if the quest for strong AI succeeds and an AI system becomes better than humans at all cognitive tasks. As pointed out by I.J. Good in 1965, designing smarter AI systems is itself a cognitive task. Such a system could potentially undergo recursive self-improvement, triggering an intelligence explosion leaving human intellect far behind. By inventing revolutionary new technologies, such a super intelligence might help us eradicate war, disease, and poverty, and so the creation of strong AI might be the biggest event in human history. Some experts have expressed concern, though, that it might also be the last, unless we learn to align the goals of the AI with ours before it becomes super intelligent.

How AI is Dangerous:
When considering how AI might become a risk, two scenarios are considered:

1. The AI is programmed to do something devastating: Autonomous weapons are artificial intelligence systems that are programmed to kill. In the hands of the wrong person, these weapons could easily cause mass casualties.
2. The AI is programmed to do something beneficial, but it develops a destructive method for achieving its goal: This can happen whenever we fail to fully align the AI's goals with ours, which is strikingly difficult.

Stephen Hawking, Elon Musk, Steve Wozniak, Bill Gates, and many other big names in science and technology have expressed concern in the media and via open letters about the risks posed by AI, joined by many leading AI researchers.

IV. CONCLUSION

Because AI has the potential to become more intelligent than any human, we have no surefire way of predicting how it will behave. All above examples illustrate, the concern about advanced AI is not malevolence but

competence. A super-intelligent AI will be extremely good at accomplishing its goals, and if those goals are not aligned with ours, we have a problem.

Our civilization will flourish as long as we win the race between the growing power of technology and the wisdom with which we manage it. In the case of AI technology best way to win that race is not to impede the former, but to accelerate the latter, by supporting AI safety research.

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