# The Impact of Artificial Intelligence on Teen Life: An Exploration of Opportunities and Challenges

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*Abstract-* **Artificial intelligence (AI) guarantees to bring fundamental changes to society, affecting everything from business to government and work life to personal time. As sophisticated AI systems are developed and deployed globally, the effects on society are unclear. AI will create impactful changes for society involving diverse topics, including the economy, ethics, policymaking, philosophy and the law. The purpose of this study is to explore the potential dangers AI creates for children and teenagers. In exploring these potential dangers, the types of AI are researched to develop a strong understanding of the technology, how AI is used today and the threats that are created through AI devices. AI devices and technologies have become common for the children of today's society, but the children and even the parents often do not focus on the privacy concerns that may linger after the use of internet connected devices. In order to protect children and even adults from the dangers of AI, people need to be educated on how to properly use the technology and even to be aware of when the use of AI is out of their control. The requirements of policy advancements and changes is also imperative to properly support a secure and private environment for children. Without government controls and policies, companies will misuse and capitalize on collected data.**

*Keywords***: Artificial Intelligence, Teen life, youth and technology, adverse effects of AI**

## Introduction

The media is filled with stories told by adults about the future of AI. These stories are focused on self-driving cars, virtual assistants, and devices that support everyday business tasks (Axente, 2018). The security and advancements put into AI are for both today and tomorrow's generation. Responsible AI needs to be developed for the children of today and tomorrow (Axente, 2018). Children interact and use artificial intelligence every single day as they engage with electronic devices because almost all electronic devices used are considered smart or at least connect to an artificially intelligent source (Facts & Trends, 2018). These children are the first generation that will never remember a time before smartphones or smart assistants. This generation will likely be the first children to ride in self-driving cars, as well as the first whose healthcare and education could be increasingly turned over to artificially intelligent machines (Rejcek, 2019). This next generation is seen as a reboot of society in a completely digital age. The powers of machine learning and AI will shape this yet unformed generation more definitively than any before it (Rejcek, 2019). AI has the potential to restructure common aspects of the modern world including healthcare, energy, entertainment, governance, gaming, and much more. The consistent growth of AI is pushing adults to prepare children to inhabit a future full of new challenges and opportunities (Mehta & Ann-Kristin, 2018). The concept of Responsible Technology is beginning to emerge and play a role in today's world to help develop safe and ethical computing. Responsible Technology is the practice to build practical, usable guidelines around ethical ways of creating and deploying anything digital (Miller, 2017).

With the continued progression and growth of AI, there are issues related to jobs, health, and security that need to be handled to both maintain the growth of responsible AI and to support children. The factor most highly correlated with potential job automation is the education level of the worker who currently performs it. Government intervention is needed to ensure that children have skills ready for the future. Intervention could mean changes in school curriculum that alter both technical content and teaching methods that focus on interpersonal skills and emotional intelligence (Axente, 2018).

Many children today grow up surrounded by AI-powered voice assistants that sound or act human. The concern is that it is unknown how this interaction will influence children's wellbeing? Research done by MIT shows early evidence that interactions between children and AI devices may alter children's perception of their own intelligence (Druga & Williams, 2017). Additional research is needed to understand how digital devices may serve as responsible companions for children when embedded in toys, games, or devices. The lack of knowledge around potential side-effects from digital technology usage is one reason famous technologists like Steve Jobs and Bill Gates banned their own children from using mobile phones (Druga & Williams, 2017).

With the rapid development of information technology, the use of electronic devices in education becomes prevalent. For example, it is easy to find the shift from paper testing to computer-based or online testing in recent decades. In recent years, artificial intelligence, a new technology developed on the basis of information technology, has also been applied in education. However, artificial intelligence in education (AIEd) has its advantages and disadvantages. Some studies consider that AIEd brings more opportunities
than threats. Ma and her colleague found that compared with traditional learning
tools, intelligent tutoring systems (ITS) are more effective tools for learning by analyzing

107 studies. Erdemir and ˙Ingeç (add year) also found that intelligent learning environments created through web-based tutoring systems have a positive influence on academic achievement and permanence in education. What is more, one study shows that AI can help to detect students' emotions during class, and teachers may adjust their teaching accordingly.

However, the prevalent utilization of artificial intelligence in the teaching–learning
process may also bring a series of disadvantages. The ethical problems of using AI to collect
educational data and conduct relevant analytics have also been the focus of many studies.
In addition, Holstein  pointed out that the need of teachers and students toward AI in education remains unclear. Zanetti, Iseppi, and Cassese also raised their apprehension that
AI in education may be "deviate" and become potentially malicious, due to programmers' biases or
other purposeful actions. Therefore, it is worth discussing the potential influence of AI in education.

## Artificial Intelligence and Social Adaptation

The youth of today are growing up surrounded by artificial intelligence (AI). Their values, ways of thinking, and moral codes are all shaped not only by their parents or immediate caregivers but also by the technology that is ever-present in their daily lives. This article will dive into the impacts of AI and how these can shape the future of the youth today.

The Presence of AI in Society

When talking about AI, simply put – it is everywhere. AI is not just about robots or self-navigating vehicles. It is on the internet, on social media, and on smart devices or personal assistants such as Siri and Alexa.

One of the most common misconceptions about AI is the danger that it can impose. After all, when talking about humans relying on technology, there have been too many movies that show how that could go wrong. But, in the modern world, AI can become an essential piece of technology that can help society progress – as long as it is made for this purpose.

AI is well-used by both the older and younger generation. It has a role in shaping business processes, managing marketing campaigns, and most commonly, recommending the best articles or videos to enjoy while browsing social media.

## AI for the Youth

Today's youth – more popularly known as the Gen Z and Generation Alpha – have grown up with technology. Chances are, they have no idea what a beeper or a typewriter is. They are surrounded by AI even though they may not know what it is.

Adults use different gadgets and devices for managing their daily schedules and responsibilities. It is thus not surprising that the youth also know – or expect to know – how to use these devices. The widespread use of smartphones, tablets, and personal computers has helped kids and teens to familiarise themselves with technology, and more specifically with AI.

The most common type of artificial intelligence present today is what experts call weak AI. This is the AI found in algorithms used to predict responses. The best example of these algorithms is found in social media websites that recommend ads or videos specific to the user's interests.

Thus, when a kid or teen is busy searching for cute dog videos, the AI algorithm works to recommend more of these videos to watch next. Aside from social media, AI can be found in smart home systems with the use of Alexa or Siri. Give a voice command, and the AI processes the command to follow it. Ask a question, and the AI answers based on patterns and data gathered from its use.

## Positive Impacts of AI

Artificial intelligence for the youth is best used in an educational setup. Many schools have already started to introduce several technological innovations with the use of AI.

In the classroom, AI can help develop individualised learning tools that can help the student progress better. With the use of this technology, educational centres can also provide better services to each student, making sure that no one is left behind.

Outside of the classroom, virtual summer camps are becoming increasingly popular with the help of AI. Kids and teens can enjoy several activities throughout their summer break. These camps cater to a wide range of interests from arts and music to STEM and robotics. Another positive impact of AI benefits both the parent and the child. Artificial intelligence can be used to develop a proper assessment for kids with special needs.

Expensive consultations and diagnoses can become a thing of the past, as AI can provide a more cost-effective yet efficient way to properly diagnose a learning disability. An early diagnosis will help the child learn to manage the disability and go on to lead a productive life as an adult.

## Threats of Artificial Intelligence

There is a visible evolution of AI and more computers are learning to make decisions on
their own. These decisions are now being made by machines that have no consciousness or

evolved level of reasoning. Many of these developments in AI are frightening to many and fascinate others (Jan et al., 2019).

The combination of Deep Learning and Big Data is creating a revolution in AI. Traditional data processing techniques have several limitations that limit the processing power of handling large amounts of data. Many experts believe that AI is more of a cultural revolution than a technological one and many in our society are not prepared for this advancement. In order to adapt to these new realities, society will need to be educated. This education is imperative to aid in adaptation and to assist future generations to learn to live in a world that is radically different from today (Jan et al., 2019).

The amount of data stored through AI devices is only going to grow. As this data expands the privacy risk grows as a major concern. A valid concern is that this collected data may be used to confirm preconceived ideas and prejudices or play roles in racial profiling, censorship, or prediction of the criminal personality. Machines today are already analyzing patterns in behavior and creating discriminatory criteria. The more complex the technological development becomes, the more complex the ethical questions it raises (United Nations, 2018).

**Protecting the Youth from the Negative Impacts of AI**
As mentioned earlier, AI is ever-present in the lives of the youth although they may not be aware of it. AI works by gathering data, and every like, click, or share adds to the digital footprint of a kid using this technology. To protect the safety and welfare of the youth, it is important to monitor their use of technology from an early age. The most helpful way to do this is to educate them on the proper ways of using technology.

The child should understand that their sensitive data can be used by ill-meaning AI developers. Remember that kids have a mind of their own, so teaching them the dos and don'ts when using AI will help safeguard their security.

**AI and Children**
Children interact and use artificial intelligence every single day as they engage with electronic devices because almost all electronic devices used are considered smart or at least connect to an artificially intelligent source (Facts & Trends, 2018). These children are the first generation that will never remember a time before smartphones or smart assistants. This generation will likely be the first children to ride in self-driving cars, as well as the first whose healthcare and education could be increasingly turned over to artificially intelligent machines (Rejcek, 2019). This next generation is seen as a reboot of society in a completely digital age. The powers of machine learning and AI will shape this yet unformed generation more definitively than any before it (Rejcek, 2019). AI has the potential to restructure common aspects of the modern world including healthcare, energy, entertainment, governance, gaming, and much more. The consistent growth of AI is pushing adults to prepare children to inhabit a future full of new challenges and opportunities (Mehta & Ann-Kristin, 2018). The concept of Responsible Technology is beginning to emerge and play a role in today's world to help develop safe and ethical computing. Responsible Technology is the practice to build practical, usable guidelines around ethical ways of creating and deploying anything digital (Miller, 2017).

**Conclusion**
AI is clearly a life changing technology that is expanding rapidly. The development and progression of AI requires much attention and guidance around the development of algorithms used by AI. The potential dangers discussed in this paper can very easily overshadow the multitude of positive benefits AI creates. The true danger within AI comes from people not understanding it in its entirety. People must ask questions and understand where the data from a recording, internet search, or a home smart assistant is going to be stored and understand that one day, it may be used again.

Many people fear AI and the change AI is bringing to society. Some say the fears are exaggerated, but the risks of AI are very real. The risks of AI require attention from users of AI, developers of AI algorithms, lawmaker, and even just anyone in public spaces. The reliance on AI alone could carry risks that are already here. Smart devices are a growing part of society and already aiding in decisions being made. These types of systems will continue to expand into areas like healthcare, criminal justice, and education. AI is already touching on educating children, but soon AI may be aiding in policing the streets or prescribing medications.

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