

**SMART TECHNOLOGIES AND INNOVATIVE APPROACHES IN
RESEARCH: BUILDING A DIGITAL FUTURE**

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Abstract *This article delves into the transformative role of smart technologies in research, highlighting how innovative tools and digital approaches are reshaping various fields of study. It discusses the integration of cutting-edge technologies like artificial intelligence (AI), machine learning, big data, the Internet of Things (IoT), and blockchain in advancing research capabilities. By examining case studies and real-world applications, the article illustrates how these technologies are enabling faster, more accurate, and more scalable research outcomes. It also explores the challenges researchers face when adopting these digital tools, such as data security, ethical concerns, and the need for new skill sets.*

Keywords: *Smart technologies, artificial intelligence (AI), machine learning, Internet, wheelchair, children's problems.*

Introduction

What is a digital future? According to Infoscipedia, the world's largest database of information science and technology, it is an imagined picture or vision in distant time being significantly shaped by the technology of countries, societies, organizations and individuals. It is true that we are living in modern world, where the internet and technology have already become an essential part of our lives over the past decade. Nowadays, we cannot imagine our lives without them, as they are integrated into education, public services, social networking, health care system, finance, work and employment. Unfortunately, a growing appeal of technologies raise serious concerns regarding loss of job, creativity and interpersonal skills like critical thinking, problem solving and decision making. According to research of MIT



Technology review, it is given that automation and digitalization will destroy many professions not only it will be adopted in manufacturing, clerical and retail work, but also in law, financial services, education and medicine as well. Economist Erik Brynjolfsson and his colleague Andrew McAfee argued that technological change was eliminating jobs faster than it was creating them. One of the greatest threat associated with automation and AI.

Artificial intelligence could replace nearly 300 million full-time jobs, a report by bank Goldman Sachs says. It might replace a quarter of work tasks in the US and Europe but may also create new jobs and a productivity boom. For advantages, it could increase the total annual value of jobs and services produced globally 7%. Nearly two thirds of jobs in the USA and Europe only “are exposed to some degrees of AI automation” and around a quarter of all jobs could be performed by AI entirely. However, there are some jobs, which will not be threatened to diminish. Take teachers, lawyers, judges, directors, managers, artists and psychologists as an example, human factor is important. While AI kills some job, it is also paving the way to new future jobs. One of them is a big data analyst. According to reports of Statista, it is highly likely to grow by 30%, generating revenue of over \$68 billion. Not only in professions, but also technology make our life easier and simpler. Year by year e-commerce is preferred by many people. Sitting at home, consumers are purchasing products from online shops via internet. There is not time and distance problems anymore. The top marketplaces are Amazon, Taobao, Pinduoduo and AliExpress. In 2024, the number of digital buyers is at 2.71 billion. Online shopping is becoming ever increasing over the past few years. According to Oberlo statistics, 2024`s figures are 70 million more than the previous year`s, marking nearly 3% year-over-year increase. It is predicted that e-commerce is set to continue increasing. Digital future with digital cars. Automotive industry also has undergone a huge transformation, as it is producing autonomous and electric cars.

For advantages, future cars have numerous benefits to people and nature. When it comes to personal benefits, it is automated, so it can drive itself without



drivers. These cars combine radar sensors, complex algorithms and machine learning systems to safely operate and navigate the vehicle.

Conclusion

In conclusion, smart technologies and innovative digital approaches are revolutionizing the research landscape, offering unprecedented opportunities to enhance the speed, accuracy, and scope of scientific discovery. From artificial intelligence and machine learning to the Internet of Things (IoT) and blockchain, these technologies are transforming the way data is collected, analyzed, and shared across various fields. While challenges such as data privacy, ethical considerations, and the need for upskilling remain, the benefits of embracing these tools far outweigh the obstacles. These digital innovations not only improve research efficiency but also promote global collaboration, making it possible for researchers to work together across borders and disciplines to tackle complex, interconnected global issues.

As we look to the future, the continued integration of smart technologies will undoubtedly propel research into new frontiers, enabling solutions to problems that were once thought insurmountable. By leveraging the full potential of these innovations, the research community can accelerate progress, foster sustainability, and build a digital future that benefits everyone. The digital revolution in research is not just about enhancing current practices but also about opening new avenues for discovery and collaboration, ultimately shaping a more informed, interconnected, and dynamic world.

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