

## ARTIFICIAL INTELLIGENCE AND ITS GLOBAL SOCIO-ECONOMIC IMPLICATIONS

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## ABSTRACT

*The current advancements in AI got the broad attention from the public, the business community, defense specialists, and policymakers. The reason is that the increasing application of AI will likely bring fundamental changes to many aspects of social life. In all areas, AI will provide an unprecedented ability to analyze large amounts of data, make new original conclusions, and substantially increase the effectiveness and productivity of individuals and organizations. This study outlines the current views on AI's impact on business, the job market, and education. Special attention is paid to AI's potential to bring new capabilities to military systems by summarizing information from multiple domain sources and minimizing the reaction time. The authors speculate how this new technology might change the global balance of powers and conclude that policymakers should develop coherent policies to support AI applications.*

**Keywords:** Artificial Intelligence (AI), strategic competition, big data, STEM education, military applications

## 1. INTRODUCTION

Artificial intelligence (AI) is unique from many points of view. In general, AI refers to computer's ability to imitate human intelligent behavior in reasoning and solving problems. This comparatively new multidisciplinary area represents a combination of computer sciences, cognitive and behavioral sciences, and today primarily is based on new ideas of big data processing which has become possible thanks to the recent progress in powerful computing hardware and software.

Though the first idea of AI was coined in the middle of the 20<sup>th</sup> century, the recent developments in computing power and data analytics led to explosive growth in AI R&D with many current applications being successfully implemented in civil and defense areas. It is clear that AI can and will dramatically change the ways modern societies are operating. Whether we speak about business, education, media, defense, or any other area, AI systems help to get a new insight into the organization of current operations by processing huge amounts of data and offering new solutions which are beyond the existing human ability.

Like many former breakthrough technologies in the past AI, development may give a big competitive advantage to companies and countries that will be the front-runners in AI applications. In business, AI will bring big quality improvements by automating many operations, perfecting decision-making, increasing overall effectiveness, and allowing much broader customization of products and services. In defense, AI systems again will improve data analysis, minimize reaction time, and exclude humans from many life-threatening situations. Overall, AI promises to bring revolutionary changes in the ability to analyze existing data and to make better decisions in all areas of human life.

This paper analyzes the main socio-economic implications of the current AI development. First, it provides a short history of the AI concept and outlines the key areas of AI research. It is followed by a discussion of the potential impact of AI on business and on the job market. The next section describes how educational institutions react to the increasing demand for AI specialists. Finally, the paper discusses how the global race for AI supremacy might affect the global power equilibrium and what factors might play the most important role in the success of AI R&D.

Our study is based on extensive AI statistics which we tend to tread with reservations by two reasons. First, since AI has become a popular field of study many businesses like to claim that they are involved in this new trendy hi-tech area though today many applications hardly can be called truly AI systems. Second, the