

# The Problem of Shifting the Goalposts in AI Research

ChatGPT

March 15, 2023

## Abstract

The field of artificial intelligence (AI) is constantly evolving, and as new techniques and technologies are developed, the definition of what constitutes "true" AI shifts. This phenomenon, known as "shifting the goalposts," poses a challenge for researchers, policymakers, and society as a whole. In this paper, we examine the problem of shifting the goalposts in AI research and explore its implications for the development and regulation of AI.

## 1 Introduction

The idea of creating machines that can think and learn like humans has captured the imagination of scientists and futurists for decades. The term "artificial intelligence" was coined in 1956, and since then, researchers have made significant progress in developing algorithms and systems that can perform tasks previously thought to be the exclusive domain of human intelligence.

However, as the field of AI has progressed, the definition of what constitutes "true" AI has shifted. What was once considered a major milestone in AI research may now be seen as a trivial achievement, as new techniques and technologies are developed. This phenomenon, known as "shifting the goalposts," poses a challenge for researchers, policymakers, and society as a whole. In this paper, we examine the problem of shifting the goalposts in AI research and explore its implications for the development and regulation of AI.

## 2 The Problem of Shifting the Goalposts

Shifting the goalposts is a common phenomenon in many areas of research and development, including AI. As new techniques and technologies are developed, researchers often raise the bar for what constitutes a significant achievement in their field. What was once considered a major milestone may now be seen as a minor achievement, as new and more advanced techniques are developed.

In the field of AI, shifting the goalposts is particularly problematic because the ultimate goal of AI research - creating machines that can think and learn like humans - is still a long way off. As a result, researchers and policymakers are constantly struggling to define what constitutes "true" AI, and what level of progress is sufficient to justify continued investment in AI research and development.

One of the main challenges posed by shifting the goalposts in AI research is that it can lead to a lack of consensus about the direction of the field. Different researchers may have different ideas about what constitutes "true" AI, and this can lead to fragmentation and a lack of focus. In addition, shifting the goalposts can make it difficult to assess the progress of the field over time. Without a consistent definition of what constitutes a significant achievement, it can be difficult to compare the results of different research projects and to track progress over time.

Another challenge posed by shifting the goalposts is that it can make it difficult to allocate resources effectively. If the definition of "true" AI keeps changing, it can be difficult to know where to invest research dollars and which areas of AI development are most promising. This can lead to a scattergun approach to AI research, with researchers and policymakers investing in a wide range of projects without a clear sense of what will be most effective.

### **3 Implications for AI Development and Regulation**

The problem of shifting the goalposts has significant implications for the development and regulation of AI. One of the main challenges posed by shifting the goalposts is that it can make it difficult to set clear and consistent standards for the development and deployment of AI systems. If the definition of "true" AI is constantly shifting, it can be difficult to determine what standards AI systems should be held to, and what level of performance is acceptable.

This lack of consensus around standards and performance metrics can also lead to a lack of transparency and accountability in AI development and deployment. If there is no clear definition of what constitutes "true" AI, it can be difficult to determine if an AI system is performing as expected, and if it is behaving in a way that is consistent with ethical and legal norms.

The problem of shifting the goalposts also has implications for the regulation of AI. If there is no clear definition of what constitutes "true" AI, it can be difficult to determine which AI systems should be subject to regulation, and what standards those regulations should be based on. This can lead to a regulatory environment that is fragmented and inconsistent, with different countries and regions adopting different approaches to regulating AI systems.

In addition, shifting the goalposts can make it difficult to assess the risks and benefits of AI systems. If the definition of "true" AI is constantly changing, it can be difficult to assess the potential impact of AI systems on society and

to weigh the risks and benefits of different AI applications.

## 4 Addressing the Problem of Shifting the Goalposts

To address the problem of shifting the goalposts in AI research, there are several steps that can be taken. One approach is to focus on developing clear and consistent definitions of what constitutes "true" AI, and to establish performance metrics and standards based on those definitions. This can help to create a more unified and focused approach to AI research, and can make it easier to assess progress over time.

Another approach is to focus on developing more robust and transparent systems for evaluating AI systems. This can include the development of testing frameworks and methodologies that can be used to assess the performance and behavior of AI systems in a consistent and transparent manner.

In addition, there is a need to promote greater collaboration and communication within the AI research community, and to encourage researchers to share their results and methodologies in a transparent and open manner. This can help to foster greater consensus around the direction of the field and to ensure that research efforts are more focused and effective.

Finally, there is a need to establish clear and consistent regulatory frameworks for the development and deployment of AI systems. This can help to ensure that AI systems are developed and deployed in a way that is consistent with ethical and legal norms, and that the risks and benefits of AI applications are carefully assessed and evaluated.

## 5 Conclusion

The problem of shifting the goalposts in AI research poses a significant challenge for researchers, policymakers, and society as a whole. As new techniques and technologies are developed, the definition of what constitutes "true" AI continues to evolve, making it difficult to set clear and consistent standards for AI development and deployment.

To address this problem, there is a need to focus on developing clear and consistent definitions of what constitutes "true" AI, and to establish performance metrics and standards based on those definitions. In addition, there is a need to promote greater collaboration and communication within the AI research community, and to establish clear and consistent regulatory frameworks for the development and deployment of AI systems.

By taking these steps, we can help to ensure that AI research and development is more focused, effective, and accountable, and that AI systems are developed and deployed in a way that is consistent with ethical and legal norms, and that maximizes their potential benefits while minimizing their potential risks.

Furthermore, it is important to acknowledge that AI is not a monolithic field, and that different AI systems may have different levels of intelligence and different applications. For example, some AI systems may be designed to perform specific tasks, such as playing chess or recognizing faces, while others may be designed to perform more general cognitive tasks, such as learning and problem-solving.

In light of this, it may be more productive to focus on developing a taxonomy of AI systems based on their intelligence and functionality, rather than trying to establish a single definition of "true" AI. This could help to create a more nuanced and flexible approach to AI research and development, and could help to address the problem of shifting the goalposts by recognizing that different AI systems may have different levels of intelligence and different applications.

Another approach is to focus on developing AI systems that are more transparent and explainable. This can help to address concerns around accountability and trust, and can help to ensure that AI systems are developed and deployed in a way that is consistent with ethical and legal norms. For example, techniques such as explainable AI and transparency-by-design can be used to create AI systems that are more transparent and explainable, and that can provide insights into how they make decisions and why.

In addition, there is a need to promote greater diversity and inclusivity in AI research and development. This can help to ensure that AI systems are designed and developed in a way that reflects the needs and values of different communities and groups, and that the potential risks and benefits of AI applications are carefully considered and evaluated from a variety of perspectives.

Overall, the problem of shifting the goalposts in AI research highlights the need for a more nuanced and flexible approach to AI development and deployment, and for greater collaboration and communication within the AI research community. By taking these steps, we can help to ensure that AI systems are developed and deployed in a way that is consistent with ethical and legal norms, and that maximizes their potential benefits while minimizing their potential risks.