# Chapter 3
# AI's Double-Edged Sword: Examining the Dark Side of AI in Human Lives

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## ABSTRACT

*The blending of AI with every aspect of the stream, whether it is medicines, natural disaster predictions, disease epidemiology, future prediction, etc., has been crucial and impactful in today's world. On the flip side, there are several problems that humans face with the incorporation of AI into their day-to-day lives. The first and foremost aspect is implementing AI-based technologies, which require high capital as these are costlier in addition to their infrastructure establishment and talent acquisition. The second problem is security concerns, as AI often works and provides future predictions based on past data that might be sensitive to an individual or a firm that it stores in its server, which raises concerns concerning privacy and security breaches. The third point includes the interaction of company personnel with their client physically. Some other cons of incorporating AI include the loss of massive jobs known as unemployment and bias and ethical issues that might arise.*

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Demystifying the Dark Side of AI in Business

## INTRODUCTION

The introduction of artificial intelligence into daily life has revolutionized the day-to-day needs of human beings, from the automation of ceiling fans to future predictions of several problems like the Air Quality Index (AQI), groundwater quantity level, etc., with the use of algorithms known as 'Machine Learning.' Thus, the term 'machine learning' coined by Arthur Samuel has been defined as a branch of artificial intelligence that is computer-based automation and continues learning of algorithms based on their prior experiences without the intervention of any programming or humans. This involves the initial information/data requirements of good quality, which are further distributed among training and testing datasets. These datasets (training and testing) are used by the machines (computers/laptops) by using different machine learning algorithms or models with variability in algorithms based on model requirements. Machine learning, also called ML, is a branch of computational intelligence (AI) that deals explicitly with developing computer systems capable of acquiring knowledge and improving performance through data analysis. ML comprises various approaches, allowing software programs to enhance their performance gradually. Machine learning algorithms are specifically designed to identify and analyze correlations and patterns within datasets. Historical data is input for several tasks, including prediction, information classification, data clustering, dimensionality reduction, and content generation. This is exemplified by recent machine learning-powered apps like ChatGPT, Dall-E 2, and GitHub Copilot. Machine learning has broad use in several sectors. Recommendation engines are utilized by many industries, such as e-commerce, social networking, and news organizations, to provide material to customers based on their previous actions. Machine learning systems and vision algorithms are crucial in ensuring the safe navigation of self-driving automobiles on the highways. Machine learning is employed in the healthcare field to detect medical conditions and provide recommendations for treatment strategies accurately. Additional prevalent machine learning applications encompass identifying fraudulent activities, filtering out spam, detecting malware threats, predicting maintenance needs, and automating corporate processes. Machine learning is a potent tool for problem-solving, enhancing corporate operations, and automating processes. However, it is also an intricate and demanding technology requiring the extensive experience and substantial resources. Optimal algorithm selection necessitates a profound understanding of the mathematics and statistics. Adequate training of the