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# **Legal Frameworks for the Integration of Artificial Intelligence**

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## **Abstract**

The lightning-fast development of artificial intelligence and neural networks in general has had a tremendous impact on many different fields, and biological engineering is only one of those fields. These innovations have the potential to completely revolutionize the field of medicine by enhancing diagnostics, treatment planning, and tailored medication. This might be accomplished. However, there are ethical and legal concerns about the manner in which they should be incorporated into biomedicine. This study's objective is to investigate the existing legal frameworks that regulate the uses of artificial intelligence and neural networks in biomedical engineering and to evaluate how effectively such frameworks address the challenges posed by technological inclusion. On a global, regional, and national basis, we evaluated the rules and regulations that regulate the use of artificial intelligence and neural networks in biomedical engineering. These laws and regulations control the field. According to the findings of our research, even if the current legal frameworks have been improved in some respects, substantial problems are still present. These problems are particularly prevalent in the areas of data privacy, algorithmic responsibility, and ethical dilemmas. Also, the article discusses the need of doing ongoing evaluations and making adjustments in order to keep up with the fast advancement of artificial intelligence and neural networks in the area of biomedical engineering.

*Keywords: artificial intelligence, biomedicine, artificial intelligence law regulation, biomedical engineering*



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