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Practices and use of artificial intelligence in cyber security

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Abstract

Over the years, with the development of the Internet, although the main motives for cyberattacks have remained largely unchanged, cybercriminals have made their methods much more sophisticated. Traditional cybersecurity solutions are not enough to detect and reduce emerging cyber attacks. Certainly cyber security is an area that can benefit the most from the introduction of artificial intelligence. In cases where conventional security systems may be slow and inadequate, artificial intelligence techniques can improve their overall security performance and provide better protection against an increasing number of complex cyber threats. This article provides an overview of machine learning and in-depth learning techniques and their applications in cybersecurity. In this study, several applied machine learning and deep learning algorithms are mentioned, which according to the tests of decision tree algorithms, deep belief network and recurrent neural network have the highest success rate.

Keywords: Cybersecurity, Artificial intelligence, Intrusion detection, Deep learning, Machine learning.