

# The AI-Powered Attack Vector: Evaluating the Potential Impact and Feasibility of AI-Generated Cyber Threats

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**Abstract:** *As Artificial Intelligence (AI) advances, cyber attackers are using AI to create sophisticated threats. This study explores the feasibility and impact of AI-generated cyber-attacks, examining the intersection of AI, machine learning, and cybersecurity. We analyse real-world examples of AI-powered attacks, including phishing, malware, and vulnerability exploitation, to understand their effectiveness and detection challenges. Our research aims to inform the development of proactive countermeasures to combat AI-powered cyber threats. By investigating AI-generated cyber threats, we hope to improve cybersecurity defences and mitigate the risks associated with these emerging threats.*

**Keywords:** AI-generated cyber threats, cybersecurity, artificial intelligence, machine learning