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Ransom ware Detection and Prevention: New Methods and Technologies

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Overview of Ransomware Ransomware is a type of malicious software designed to block access to a computer system or data until a ransom is paid. It has become increasingly sophisticated and prevalent, targeting individuals, businesses, and governments worldwide. The evolution of ransomware attacks can be traced back to the late 1980s with the "AIDS Trojan," which was one of the first known examples of this type of malware. Since then, ransomware has evolved significantly, with modern variants employing advanced encryption techniques and spreading through various vectors, including phishing emails, malicious websites, and exploit kits.

Importance of Detection and Prevention The impact of ransomware on businesses and individuals is profound, leading to significant financial losses, operational disruptions, and reputational damage. For businesses, ransomware attacks can result in extended downtime, loss of sensitive data, and substantial recovery costs. For individuals, personal data, including photos and documents, can be held hostage. Effective detection and prevention methods are crucial to mitigate these risks, protect valuable data, and ensure the continuity of operations.