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## A Review on Cybersecurity in HR Systems: Protecting Employee Data in the Age of AI

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Abstract: This review critically examines the integration of artificial intelligence (AI) into human resource (HR) systems and evaluates its implications for cybersecurity. As digital transformation accelerates, HR systems increasingly process and store substantial volumes of sensitive employee data, making robust cybersecurity measures essential. The primary aim is to highlight significant cybersecurity challenges, identify advanced AI-driven security solutions, and understand their effectiveness in safeguarding employee data. Sources were selected based on relevance to the integration of AI in HR systems, their contribution to cybersecurity, and empirical evidence of both vulnerabilities and defenses. The review reveals that while AI can significantly enhance the detection of anomalies and automate security responses, it also introduces new vulnerabilities, such as sophisticated AI-driven attacks and biases in algorithmic decision-making. Key findings indicate a heightened need for dynamic security protocols that can evolve in tandem with AI technologies. Effective strategies highlighted include AI-enhanced encryption, behavioral analytics for threat detection, and AI-driven security training simulations. The findings emphasize the dual-edged nature of AI in cybersecurity for HR systems. For practitioners, adopting AI-driven security solutions offers a forward-thinking approach to protecting sensitive data but also requires a vigilant reassessment of security strategies in light of AI-specific threats. Policymakers are urged to consider more robust regulations that address the unique challenges posed by AI technologies. Ultimately, the paper calls for a proactive stance in cybersecurity management to anticipate and mitigate potential threats before they impact the integrity and trustworthiness of HR systems

Keywords: Cybersecurity, Human Resources (HR), Artificial Intelligence (AI), Employee Data Protection



