A Study on Role of Artificial Intelligence in Detecting and Preventing Cyber Crimes in India

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Abstract*: Cybercrime has become an escalating threat in the digital age, with India experiencing a significant rise in cyberattacks and data breaches. This study investigates the critical role that Artificial Intelligence (AI) plays in the detection and prevention of cybercrimes within the Indian context. The research delves into the current state of cyber threats in India, highlighting the vulnerabilities and challenges faced by individuals, businesses, and government agencies. It explores the evolving landscape of cybercrimes, encompassing diverse forms such as phishing attacks, data theft, ransom ware, and online fraud. The primary focus of this study is the application of AI technologies, including machine learning, natural language processing, and anomaly detection, in identifying and mitigating cyber threats. It investigates the effectiveness of AI-based solutions in real-time threat detection, threat intelligence analysis, and incident response. Furthermore, the study examines the legal and ethical considerations surrounding the use of AI in combating cybercrimes in India. It analyzes the existing regulatory framework and privacy concerns, emphasizing the need for a balanced approach to safeguarding digital infrastructure while protecting individual rights. Through an in-depth analysis of case studies and expert opinions, this research aims to provide insights into the potential benefits and limitations of AI in addressing cyber threats in India. It also offers recommendations for policymakers, businesses, and cybersecurity professionals on harnessing AI's capabilities to enhance cybersecurity measures and protect the digital economy. In conclusion, this study highlights the growing importance of Artificial Intelligence in the context of cybercrime prevention and detection in India. As the nation continues to digitize rapidly, harnessing AI's power becomes paramount in safeguarding critical data, infrastructure, and individual privacy in an interconnected world.*

Keywords: Artificial Intelligence, Machine learning, Fraud Detection, Cyber Security