



THE ROLE OF AI TECHNOLOGIES IN UNVEILING HUMAN TRAFFICKING NETWORKS: A LEGAL AND TECHNOLOGICAL PERSPECTIVE

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Send Article Date: 30-07-2026

Date of acceptance of the article: 07-09-2026

Abstract:

Human beings constitute the very foundation of life and remain the central focus of global attention and security institutions, which allocate enormous budgets to ensure their well-being and comprehensive development. Indeed, international organizations, national bodies, and constitutional frameworks were all fundamentally established with the primary objective of safeguarding human beings and their right to a secure and stable existence. The earth cannot prosper without preserving human dignity and respecting individual personhood. This reality gives rise to a critical problematic: how can we protect individuals from those heinous crimes that involve abducting the vulnerable and trafficking them? The principal research question revolves around preserving these innocent victims from the negative aspects of technological advancement, particularly artificial intelligence, and examining its significant role in the expansion of such criminal activities. Consequently, this research endeavors to determine the extent to which AI-related techniques can be effectively harnessed in combating this crime.

The study yielded a number of findings and recommendations, the most significant of which is that this phenomenon plagues all nations worldwide, necessitating urgent international cooperation to confront this grave threat. Furthermore, artificial intelligence technologies and information technology can serve as both part of the problem and part of the solution. Criminal organizations have evolved their methods by leveraging AI and information technologies, enabling them to expand their operations, facilitate the recruitment of victims, and streamline their exploitation activities.

Keywords: Artificial Intelligence, Human Trafficking, Crime Detection Combating, Transnational Organized Crime.

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Introduction:

Human trafficking constitutes an abhorrent crime that grossly violates fundamental human rights and poses a serious threat to human dignity. Combating this crime ranks among the most formidable challenges confronting the international community, even amidst global civilizational progress. Technology and innovative systems such as artificial intelligence and intelligent platforms can be harnessed to track victims and exercise control over criminal networks. Indeed, artificial intelligence represents an exceptionally powerful and promising tool in the fight against human trafficking, capable of analyzing vast quantities of data to identify trafficking indicators, pinpoint potential victims, track perpetrators, and prevent crimes from occurring in the first place. AI offers numerous advantages in preventing trafficking: remarkable speed and superior accuracy in data analysis compared to human capabilities.

It is futile to attempt halting the technological tide or preventing its global proliferation; such efforts would constitute a tremendous loss for the majority of the world's population who legitimately benefit from its applications in combating transnational organized crime—a phenomenon greatly facilitated by technological advancements. Rather than suppressing technology, it becomes imperative to harness it to disrupt organized criminal activities, combat trafficking, and assist its victims. The international mobility of criminals and their employment of sophisticated technology render the coordination of law enforcement and judicial authorities more essential than ever before, enabling the pursuit of crimes and criminals across borders (UNODC, Legislative Guides, 2004). Given that traffickers are not the naive individuals one might expect, but rather think and innovate new methods to perpetrate their crimes, those combating this phenomenon must similarly devise novel approaches to counter it.

The evolution of organized crime, driven by technological progress, has compelled governments and security agencies to keep pace by integrating AI tools to monitor the movements of organized crime syndicates, map their cross-border networks, and trace their funding sources. This enables law enforcement to constrain organized crime by understanding its trends and objectives while simultaneously enhancing criminal investigations-ultimately contributing to improved



community security in an era of rapid technological advancement and escalating global tensions between major powers.

The tremendous evolution of information technology, combined with its integration into communication systems, has imparted distinctive characteristics to traditional crimes that existed before the advent of such technology. It has also given rise to novel patterns of criminal activity, including human trafficking via the Internet and its applications. This technology has facilitated communication between criminal groups, coordination of their operations, and the brokering of deals between trafficking networks, victims, and clients—all from their countries of origin without physical relocation. Moreover, the Internet has become a thriving marketplace for such trade, attracting those seeking quick and effortless profit, from advertisements and deceptive offers designed to lure victims to buying and selling activities. Modern technology has provided fertile spaces for disseminating and collecting pornographic materials, effectively creating a culture of easy access connecting suppliers and consumers of such content on an unprecedented scale; it has generated an environment conducive to its spread and established a vast market for its consumption.

Human trafficking constitutes an inhumane crime that has become a source of concern for all nations worldwide, affecting men, women, and children through various forms of exploitation, including prostitution, organ trafficking, and sexual exploitation. As an international crime, it extends across numerous countries—if not the majority—with manifestations varying from one state to another depending on national perspectives on the concept of trafficking and the degree of respect for human rights. This crime accelerates rapidly in an upward trajectory amid globalization and the communications and information revolution. Poverty and ignorance rank among the principal contributing factors, as victims migrate from poorer nations to wealthier ones, transforming these regions into thriving markets for human trade.

This is precisely where the researcher perceives the need to discuss the crime of human trafficking via Internet networks by elucidating the concept of trafficking and demonstrating the success of applying artificial intelligence techniques in combating it. The

research addresses the crime of trafficking and the efficacy of AI applications in countering it, noting that the international community has largely succeeded in controlling this crime. However, it has recently evolved due to technological developments now accessible to all humans everywhere. The Internet has provided traffickers with an easy means to ensnare children and women for exploitation; a glance at our surroundings reveals countless women and children being traded and disseminating pornographic material—individuals who are themselves victims of trafficking. Criminals have employed social media platforms and modern technology to abduct these innocent individuals and traffic them, as confirmed by numerous studies.

The central problematic thus emerges, revolving around the conscience of responsible authorities who perceive their role in protecting these innocents from the evils lurking behind computer screens and the virtual realm of cybercrimes. The researcher envisions assisting responsible officials in examining the effectiveness of artificial intelligence applications in combating this crime.

1. Conceptual Framework of Human Trafficking Crimes

Examining the general framework of human trafficking crimes necessitates clarifying their concept and historical background, addressing their distinctive characteristics that differentiate them from conventional crimes, and delineating their various types. We shall address each topic in separate sections as follows. (J.A.Garcia, 2021, p. 69)

a) Concept of Human Trafficking Crime

Human trafficking crimes rank among the most globally pervasive human rights violations, characterized by their complexity and widespread reach. These crimes pose a grave threat to human dignity and liberty, as individuals are exploited through various means ranging from sexual exploitation and forced labor to other forms of modern slavery. International law has established a peremptory norm-prohibiting trafficking in persons-which cannot be contravened, binding upon all states as it pertains to international public order. Consequently, any state that neglects combating trafficking becomes subject to international responsibility, even if domestic law permits such practices. The established legal principle in international law



affirms that no state may invoke its internal legislation to evade fulfilling its international obligations. (Mubarak, 2023)

b) Jurisprudential Definition of Human Trafficking

Certain legal scholars have defined human trafficking as encompassing "all lawful and unlawful transactions that transform human beings into mere commodities or victims to be disposed of through intermediaries and professionals across national borders, with the intention of exploiting them in low-wage labor, sexual activities, or similar pursuits, whether such disposal occurs with or without the victim's consent, or through any other form of coercion." (Dhaas, 2018, p. 69)

The crime has also been defined as "the process of transporting, harboring, or employing a person through abduction, threats, coercion, deception, or fraud, with the aim of exploiting them in illegal activities such as forced labor (slavery), prostitution, or human organ trafficking." Others define it as "the process of recruitment, transportation, transfer, or harboring of persons for exploitation purposes, involving unlawful acts such as threats, force, or other forms of coercion or fraud." Drawing from these definitions, we can formulate a comprehensive understanding: trafficking in persons constitutes any act involving the recruitment, harboring, receiving, or transportation of individuals through force or any other means that vitiates the victim's consent, or by offering financial benefits to the victim or those in authority over them, for the purpose of material gain. (Fatima, 2013)

2- Definition of Human Trafficking in International Conventions

The definition of human trafficking has appeared in numerous international conventions, including the following:

2-1 The European Convention on Action against Trafficking in Human Beings: Article 4(1) of the 2005 Convention defines trafficking in persons as "the recruitment, transportation, transfer, harboring, or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the

consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude, or the removal of organs."⁴ It is noteworthy that this European definition aligns with the UN definition. Furthermore, Recommendation No. (11) issued by the European Council on 91 May 2000 had previously defined trafficking as "trafficking in human beings for the purpose of sexual exploitation includes obtaining one or more persons, whether natural or legal, or organizing the exploitation, transportation, or migration of persons—whether legal or illegal, even with their consent—for the purpose of sexually exploiting them through coercion, particularly violence, threats, deception, abuse of authority, or exploitation of vulnerability. (Mansour, 2009, p. 39)

2-2 The Arab Convention on Combating Transnational Organized Crime: This convention similarly contains a definition akin to the UN definition. Article (11) of the Arab Convention on Combating Transnational Organized Crime, entitled "Trafficking in Persons, Especially Women and Children," stipulates: "Each State Party undertakes to adopt necessary measures, within the framework of its domestic law, to criminalize the commission of or participation in the following acts carried out by an organized criminal group: any threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of authority, or exploitation of a position of vulnerability, for the purpose of using, transporting, harboring, or receiving persons for the purpose of unlawfully exploiting them in prostitution or other forms of sexual exploitation, forced labor, compulsory service, enslavement, or practices similar to slavery or servitude. The consent of a victim of trafficking in persons to the intended exploitation shall be irrelevant where any of the means set forth in this paragraph have been used. The recruitment, transportation, transfer, harboring, or receipt of a child for the purpose of exploitation shall be considered trafficking in persons even if this does not involve any of the means set forth in paragraph (1) of this article, and in all cases, their consent shall be irrelevant. (Bashir, 2010, p. 50)



3- Forms of Human Trafficking Crimes

Human trafficking crimes are diverse and multifaceted, varying according to the purposes for which victims are exploited. These types differ in their nature and objectives, yet all share the common thread of exploiting human beings for unlawful or coercive purposes. Below, we shall review the most prominent forms of human trafficking crimes: (Nawaf, 2013)

3-1. Sexual Exploitation

Sexual exploitation refers to "forcing victims, particularly women and children, to engage in sexual activities for profit or commercial sexual exploitation."

3-1-1. Crimes encompassed by online sexual exploitation include:

- a) Sexual Exploitation Trafficking: Trafficking in persons for online sexual exploitation constitutes a serious crime. Criminals recruit victims, often through social media platforms, and employ the Internet to organize cross-border sexual exploitation networks. Victims are forced to provide sexual services or produce pornographic content distributed online.
- b) The Growing Complexity and Danger of Sexual Exploitation: With the emergence of live streaming technologies, sexual assaults and pornographic activities broadcast in real-time have reached audiences willing to pay for access. Such activities frequently occur in closed environments where victims are detained and forced to participate.
- c) Online Grooming: Online grooming refers to the process of building trust-based relationships with children or adolescents online for sexual purposes. Criminals utilize chat rooms and social media platforms to contact victims, then manipulate them through enticements or threats to send inappropriate images or videos, or even arrange physical meetings for sexual purposes. (S.Hamid, 2018, p. 28)
- d) Sextortion: Sextortion represents a type of trafficking crime in which victims are coerced into providing sexual services or money through threats of distributing compromising images or videos. Criminals employ these threats to pressure victims—particularly

children and adolescents—into producing additional pornographic content or providing sexual services.

- e) Child Exploitation in Pornographic Material: The production, distribution, and exploitation of children in pornographic materials constitutes a grave crime. Such materials are often promoted through the dark web, with criminals exploiting children's vulnerability and operating global networks that provide access to child exploitation content for payment, thereby increasing the difficulty of tracking these activities and their perpetrators (K.M.Ghazi, 2016, p. 97)

3-2. Reasons for the Increase in Online Sexual Exploitation:

- a) Accessibility and Advanced Technology: Technological developments and the global expansion of Internet usage have created an environment that facilitates criminal activities without revealing identities. Encryption software, the dark web, and cryptocurrencies make it exceedingly difficult for authorities to identify and track these crimes.
- b) Access to Global Audiences: The Internet enables criminals to reach vast global audiences, both in terms of victims and purchasers, facilitating the proliferation of forced pornography and other sexual exploitation-related criminal activities.
- c) Psychological and Emotional Impact on Victims: Victims of online sexual exploitation experience severe psychological and emotional repercussions, suffering from shame, fear, and anxiety—factors that frequently prevent them from reporting crimes or seeking assistance. These conditions enable criminals to continue their exploitation without encountering significant obstacles (N.AL-Ayadi, 2001, p. 125)
- d) Lack of Awareness and Protection: The lack of awareness among children and young people regarding online risks renders them easy prey for criminals who exploit their ignorance of the dangers associated with communicating with strangers online. Deficient education about protecting personal information online increases their vulnerability to exploitation.

3-4. Impacts of Online Sexual Exploitation:

- a) Psychological and Physical Impact on Victims: Victims of sexual exploitation suffer severe psychological effects,



potentially including depression, post-traumatic stress disorder, anxiety, and social isolation. These consequences can devastate victims' lives long-term, rendering them susceptible to broader social and health problems.

- b) **Permanent Online Image Damage:** Once pornographic material or personal images are posted online, complete removal becomes nearly impossible. Victims may remain vulnerable to blackmail or humiliation for years due to the persistence of such material across various platforms, potentially causing problems in their professional and social lives.
- c) **Reinforcement of Criminal Networks:** Online sexual exploitation bolsters organized crime networks, with proceeds from these illegal activities funding other crimes such as drug or arms trafficking, thereby exacerbating global crime problems.
- d) **Economic and Social Harm:** Sexual exploitation affects communities generally, as victims may become burdens on healthcare and judicial systems. Moreover, the increasing prevalence of trafficking erodes public trust in technology and drives up data protection costs. (Al-Kuwar, 2010, p. 43)

4- Conceptual Framework of Artificial Intelligence

Before delving into the technical and operational dimensions of artificial intelligence in the context of countering human trafficking, it is essential to establish a clear conceptual foundation for what AI entails. This section provides a comprehensive overview of the concept, characteristics, importance, advantages, and limitations of artificial intelligence, as well as its distinctiveness from human intelligence. Such a framework is indispensable for understanding how AI technologies can be harnessed—both by criminal networks to facilitate their illicit activities and by law enforcement agencies to detect, track, and prevent trafficking crimes. The following subsections systematically explore these foundational aspects, paving the way for a more nuanced discussion of the intersection between AI and human trafficking countermeasures (M.Husmulddine, 2003, p. 72)

4-1. What is Meant by Artificial Intelligence?

Definitions of artificial intelligence are numerous, all relating to the development of machines and intelligent behavior. Some view artificial intelligence as "the science concerned with creating machines that perform actions considered intelligent when performed by humans." According to this conception, AI represents a scientific discipline in its own right, aiming to endow computers and other machines with intelligent characteristics, enabling them to undertake activities previously exclusive to humans—such as thinking, learning, creativity, and communication.

Proudfoot & Copeland define it as "the process of developing computer systems capable of performing tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and translation." Kurzweil, one of the most prominent researchers in the AI field, describes it as "the art of creating machines capable of performing operations that require intelligence when performed by humans." It has also been defined as a term applied to "the type of intelligence that machines can acquire through programming that makes them appear to possess a mind simulating the human mind's various capabilities." Oracle Corporation defines it as "systems or devices that simulate human intelligence to perform various tasks, capable of improving themselves based on collected information, characterized by superior thinking and data analysis capabilities". (S.A.Othman.ETHICAL, 2010, p. 88)

From these multiple definitions, we can conclude that artificial intelligence is "a branch of computer science concerned with designing machines and computer programs capable of simulating human behavior and mental abilities." It rests on two fundamental pillars: sophisticated programs that mimic the human mind, and vast quantities of data that are utilized, analyzed, and tracked to reach conclusions, make decisions, or simulate human cognition. Based on the foregoing, we can define artificial intelligence as a means of preparing computers or robots, controlled by programs that think intelligently in much the same way intelligent humans think. AI is thus one of the modern computer sciences seeking advanced programming methods to perform operations and draw conclusions that closely resemble human intelligence attributes. Despite the



multiplicity of definitions, they all concur that artificial intelligence is a computer science discipline that endows machines with the ability to interact with their external environment independently and freely, according to circumstances and conditions. Finally, we wish to note that artificial intelligence represents human competition—a challenge among certain human minds seeking human superiority—as well as an innovative and creative addition to innate intelligence. Furthermore, AI programs are characterized by significant expansiveness, participation, and openness to other sciences, as their design involves computer engineers, educators, psychologists, philosophers, thinkers, mathematicians, physicists, and others interested in developing human mental and intellectual capacities. (Ibrahim, 1996, p. 196)

4-2. Characteristics of Artificial Intelligence

Artificial intelligence possesses numerous characteristics that render it an effective investment across many fields, given its simulation of human intelligence through computer systems—an attempt to replicate human behavior and thinking patterns. However, AI being defined as computer systems that mimic human behavior does not imply that any software program operating through specific algorithms and performing defined tasks constitutes artificial intelligence. For a computer system to merit this designation, it must be capable of learning, collecting and analyzing data, and making decisions based on this analysis in a manner that simulates human thinking. This necessitates three main qualities and characteristic (Y.Baker, 2022, p. 117)

- a) Learning Capacity: The ability to acquire information and establish rules for utilizing this information.
- b) Data Collection and Analysis: The capability to gather and analyze data and information, creating relationships among them—facilitated by the growing proliferation of big data.
- c) Decision-Making: Making decisions based on information analysis, rather than merely implementing algorithms that achieve a predetermined goal.

In light of the above, we observe that Google's search algorithm, for example, does not qualify as artificial intelligence unless it possesses these three characteristics. Thus, if someone searches for

tourism in Algeria and receives responses limited to tourism information only, this does not constitute AI. For it to qualify, the algorithm would need to collect additional data and present supplementary suggestions—that is, the system would automatically propose advertisements about tourism offers in Algeria, the best airlines, and so forth. This is precisely what occurs with Google. (Al-Hilali, 2023)

4-3. Importance of Artificial Intelligence

Artificial intelligence represents one of the modern sciences generated by the contemporary technological revolution, having acquired exceptional importance in recent years due to its numerous applications across various vital sectors of human societies. AI technologies have brought about radical transformations across many fields, including:

- a) **Economic Impact:** AI can provide solutions to most challenges confronting societies, contribute to achieving sustainable development goals (including affordable clean energy, climate action, life below water, and life on land). Additionally, AI positively impacts healthcare by automating diagnostic devices for epidemics and treating chronic diseases, and benefits the energy sector through clean and environmentally friendly energy generation to reduce environmental pollution, as well as tracking climate changes using AI-enhanced robots. AI is also used to predict crop yields from space.
- b) **Business Impact:** Sixty percent of decision-makers in major corporations believe that AI can help provide solutions to the most significant problems facing modern society, while also improving individual economic welfare through information's role in creating knowledge, which in turn increases innovation opportunities and disseminates innovations, thereby improving living standards resulting from economic development and GDP growth.
- c) **Organizational and Business Impact:** AI contributes to storing information to create knowledge bases for numerous users, helps establish learning foundations, develops technology unrelated to human emotions that represent stress and cost, proves useful in business operations, eliminates routine and



unsatisfactory tasks, improves organizational knowledge bases by suggesting solutions to specific and complex problems—analyzing them more quickly than humanly possible—assists in solving complex problems with multiple solution paths or those lacking known solutions, and can utilize traditional software and store it for future use. However, AI is not limited to producing robots and artificial processes alone; rather, it represents the latest technological science aimed at simulating the human mind and its working patterns to execute tasks with precision and speed exceeding human capabilities. AI possesses exceptional importance because it contributes to preserving accumulated human expertise by transferring it to intelligent machines, enabling humans to use natural language in dealing with machines instead of computer programming languages—making machine usage accessible to all segments of society, including people with disabilities, whereas advanced machine interaction was previously restricted to specialists and experts. (Al-Sayed, 1999, p. 46)

4-4. Differences between Human Intelligence and Artificial Intelligence

Artificial intelligence comprises diverse applications; however, we will focus on those supporting administrative decision-making in business organizations. Human intelligence is characterized by numerous distinguishing features—for example, the ability to use the senses, creativity, learning from experience, adaptability, and utilizing various information sources—all of which are highly developed in the human mind but limited in AI. Conversely, capabilities such as information transfer and performing rapid, accurate calculations are areas where artificial intelligence excels beyond human intelligence. (Al-Shinnawi, 2014, p. 124)

5- Advantages of Artificial Intelligence

Artificial intelligence represents a modern cornerstone with immense potential to improve our daily lives. Thus, we present the following advantages of AI:

- a) Increased Accuracy in Future Predictions: AI helps create a more predictable work environment through complex algorithms capable of handling vast, diverse datasets to predict

financial developments for companies. This capability supports corporate efforts to identify future opportunities and risks requiring immediate decisions, such as companies employing sophisticated algorithms to determine expected sales volumes and future consumer demand trends, and using them to predict health risks, epidemics, or future carbon emission rates.

- b) Increased Productivity and Efficiency: AI helps increase corporate productivity—whether in manufacturing or services—through reliance on robots and algorithms to organize operational processes in factories, reducing time, minimizing raw material waste, and limiting production defects.
- c) Product Promotion: AI technologies enable companies to design highly effective promotional and marketing programs by determining appropriate pricing.
- d) Studying Consumer Needs: One of AI's primary advantages lies in creating significant value for user or consumer data, enabling companies to rapidly adapt to consumer needs and preferences—making customers feel valued, thereby increasing loyalty and revenue.
- e) Boosting Economic Returns: Economic returns from AI applications vary from country to country, reflecting not merely differences in investment expenditure but also economic conditions and market situations (Mansour, 2009, p. 96)

Disadvantages of Artificial Intelligence:

Despite its numerous advantages, AI presents certain drawbacks that businesses, institutions, and governments must contend with, including:

- a) Deviation from Set Objectives: Scientists caution that excessive reliance on AI technologies—particularly machine learning and algorithms—may pose future threats to human existence through their success in autonomously developing capabilities across various economic activities without necessarily aligning with human-set objectives.
- b) Conflicting Intelligent Systems: The vast majority of AI applications are highly specialized, performing specific tasks based on input-output combinations. This may cause conflicts when protocols between these systems are absent, leading to



objective clashes. For instance, a smart city relying on AI technologies might experience lighting system disruptions due to potential conflicts between energy conservation and public safety objectives.

- c) Vulnerability to Cyber Attacks: Among the economic concerns regarding AI technology use is the potential for cyberattacks compromising, manipulating, or destroying intelligent systems. AI itself might even be weaponized. (Ibrahim, 1996, p. 120)

6- AI Technologies and Their Relationship to Combating Human Trafficking Crimes

Due to technology's dominance—particularly artificial intelligence technologies—and their entry into virtually all domains, they have become an integral part of daily life for individuals and institutions, both civilian and governmental. Complete dependence or prevention of their global spread has become impossible. Although international governments may attempt to prevent AI technologies from reaching criminals today, they cannot do so permanently in the future. Evidence abounds demonstrating that some utilize these technologies to abduct individuals—especially women and children—and traffic them. Yet despite these technologies' capacity to assist perpetrators in committing trafficking crimes, they can equally serve as effective countermeasures. Through the applications criminals use to recruit and abduct individuals, authorities can trace them. The international mobility of criminals and their deployment of advanced technology necessitate even greater coordination among law enforcement and judicial authorities to pursue crimes and criminals across borders. However, despite the ability to monitor and apprehend perpetrators, they are not naive enough to be easily caught. New perpetration methods emerging make detection difficult for authorities, demanding rapid discovery of such methods to counter these grave crimes. In what follows, we shall address the relationship between AI and human trafficking, then discuss using AI and information technology to halt trafficking. (Ali, 2014, p. 9)

- 1. Relationship between AI and Human Trafficking** As previously mentioned, human trafficking ranks among the world's most brutal and complex crimes, involving the exploitation of persons through forced labor, sexual

exploitation, and inhumane conditions. With technological advancement, organized crime networks have begun employing modern technologies like AI to enhance their illegal activities. Concurrently, AI can be deployed to combat these crimes through innovative and effective means. In this context, we shall examine the relationship between AI and human trafficking—how it is used by criminals and how it can aid in countering trafficking.

2. **AI Technologies Counter Traffickers:** Technological progress, the emergence of cyberspace, and satellite communications have contributed to the proliferation of cybercrimes no longer confined to a single state's territory but crossing borders as innovative, emerging crimes—representing a form of novel criminal intelligence—making classification under traditional criminal descriptions in national and international penal codes challenging. Detecting emerging crimes—particularly Internet crimes and their devastating effects—remains a significant challenge (Safyan & Nasser, 2021).
3. **Law Enforcement Cooperation through Technology:** Article 27(3) of the UN Convention against Transnational Organized Crime encourages states to pursue law enforcement cooperation to address transnational organized crime committed through modern technology (United Nations Convention against Transnational Organized Crime, 2000: 3). Several promising examples illustrate such cooperation. INTERPOL's work notably highlights the potential of AI technologies in combating trafficking, demonstrating the possibilities technology offers for global law enforcement cooperation against trafficking. (Nasser, 2021, p. 96)
 - a) **Convention on Cybercrime:** The Council of Europe's Convention on Cybercrime, signed in Budapest in 2001 and entering into force in 2004, although not directly addressing trafficking, provides essential procedural and substantive tools enabling law enforcement authorities worldwide to cooperate in preventing and combating all types of crimes committed via the Internet—including human trafficking—particularly given the interplay



between this Convention and the trafficking protocol. (Youssef, p. 131)

- b) INTERPOL Global Communications System: INTERPOL represents the world's largest international police organization, comprising 186 member states, supporting law enforcement agencies in combating global crime. Trafficking constitutes one of INTERPOL's five main priorities. In 2006, INTERPOL established the Trafficking and Smuggling Message to provide a uniform format facilitating information exchange, accessible to all member states through INTERPOL's global communications system.
- c) Virtual Global Task Force (VGT): This aims to establish effective international partnerships among law enforcement agencies to protect children from online abuse.
- d) Internet Watch Foundation (IWF): An Internet hotline enabling users to report exposure to illegal online content.
- e) Child Sexual Abuse Image Database: INTERPOL's Child Abuse Image Database (CAID) operates as a system within the General Secretariat, with image banks contributed by law enforcement agencies worldwide facilitating global investigations into child sexual exploitation. Within five years, over 500 victims were rescued through these efforts. (Saleh, 2009, p. 103)

4. Using AI and Information Technology to Stop Trafficking Document Security and Control:

Article 12 of the Trafficking Protocol addresses document security and control (UN General Assembly Resolution 55/25/A). Numerous existing or developing technologies offer substantial potential to create new document types that uniquely identify individuals, can be read rapidly and accurately by devices, and prove difficult to forge—relying on information stored in databases beyond criminals' reach rather than on the document itself (UNODC, Legislative Guides, 2004).

The "Forged and Authentic Documents" (FADO) system exemplifies European image archiving, enabling efficient document

verification and issuing immediate, comprehensive alerts to law enforcement or immigration authorities in participating states when misuse or forgery is detected (PRADO - Public Register of Authentic Documents).

- a) High-Technology Passports: In 2004, Kyrgyzstan updated its passport format to international standards. Previous passports contained handwritten information facilitating misuse, particularly in trafficking. (Zahraa, 2012, p. 59) New passports incorporate modern technology making forgery more difficult. Additionally, a new issuance system was introduced—passports are issued from a central location where information is stored in a verifiable border database.

Another example is the Australian government's use of biometric technology in passports, measuring physical characteristics for identity verification. Common biometric measurements include fingerprints, iris recognition, hand geometry, voice recognition, and facial recognition. Facial recognition technology uses algorithms to determine whether a live face matches electronically stored images (Australian Government - The Australian Passport).

- b) Border Security: Trafficking ranks as the third-largest source of organized crime revenue globally after drug and arms trafficking, constituting one of the most significant cross-border criminal activities.
- c) Advance Passenger Information System (APIS): Established for airlines and commercial vessels by U.S. Customs and Border Protection, enabling advance passenger information collection. Electronic APIS enables smaller commercial carriers to transmit data to U.S. Customs and Border Protection.
- d) Virtual Border Shelter: The Harris shelter represents a self-contained field command center integrating communications, command-and-control, and sensing systems into a single unit, capable of connecting to either tactical radio networks or existing network infrastructure. It can also serve as a communications system foundation for receiving, aggregating, and redistributing secure voice and data communications.



Multiple border security shelters can be linked to form protective networks.

- In this regard, the UAE implements its national strategy according to the National Committee to Combat Human Trafficking's five-pillar approach (Annual Report of the National Committee to Combat Human Trafficking 2020):
- Prevention and deterrence
- Prosecution
- Punishment
- Victim protection
- Strengthening international cooperation (Zahraa, 2012, p. 67)

Conclusion

Artificial intelligence has become an essential tool in the commission of organized crimes, compelling security agencies and law enforcement bodies to develop their capabilities to match the technological advancement of criminal organizations. Without such development, their role will be limited merely to detecting crimes post-occurrence, rather than taking proactive steps to identify potential crimes, track suspects, map their funding sources, and pinpoint their targeted operational regions. Artificial intelligence offers distinct advantages in detecting organized crime, including saving time and effort in identifying perpetrators, alongside superior data accuracy—particularly given its reliance on algorithms and machine learning with analysis exceeding traditional methods. This requires security agencies to provide intensive training for personnel on utilizing these technologies and understanding their operational mechanisms, as human involvement remains effective and essential in maintaining community security and curbing organized crime, thereby bridging the gap between modern digital tools and traditional investigative techniques, achieving seamless integration of AI into daily law enforcement activities.

Concurrently with escalating global tensions, AI technologies related to maps, images, and video analysis will assume significant importance in detecting organized crime—especially given criminal networks' increasing activities amid great power conflicts, as certain governments exploit these elements to destabilize other states as part

of geopolitical struggles, and because these criminal groups find it easier to operate when nations are preoccupied with other priorities. Continuous AI-powered monitoring of messages and social media postings will become the key to protecting national security from organized crime threats in the coming years, particularly as algorithms rapidly evolve in the hands of criminal groups—facilitating concealment and identity theft, thereby increasing challenges for security agencies in preventing or predicting crimes before they occur.

Tracking funding sources for organized crime globally represents a critical point in mitigating the severity of these crimes. Combating money laundering becomes an increasingly costly, high-risk endeavor falling upon financial system guardians alongside law enforcement and security agencies. Governments must ensure their strategies incorporate advanced AI technologies, recognizing that criminal networks exploit any systemic banking, online banking, e-payment, or cryptocurrency vulnerabilities to transfer illicit funds across borders at unprecedented speed—confirming that traditional monitoring methods are insufficient and unlikely to achieve desired objectives.

Law enforcement agencies continue to face the dilemma of using AI to maintain security while balancing innovation with ethical responsibility, given direct criticisms of AI systems regarding privacy violations concerning suspects or the potential to unfairly target individuals based on previous backgrounds. This necessitates framing AI use within ethical guidelines that ensure responsible deployment while preserving its fundamental role in predicting and preventing crimes.

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