

Applying Artificial Intelligence Technology in Drug Law Enforcement in Nigeria

Nnaemeka, Obidike Frank¹ & Okeke, Arinze Nicholas²

¹Associate Professor, Department of Mass Communication, Chukwuemeka Odimegwu Ojukwu University, Igbariam Campus, Anambra State.
E-mail fo.nnaemeka@coou.edu.ng

²PG Scholar, Department of Mass Communication, Federal Polytechnic Oko, Anambra State
E-mail: nickyokeke2 @gmail.com

Abstract

The National Drug Law Enforcement Agency (NDLEA) is a federal law enforcement agency charged with eradicating drug trafficking of any sort in Nigeria. Drug traffickers innovate new ways to avoid detection. Artificial intelligence is capable of helping law enforcement get ahead of designer drugs with its online tools. The study discusses applying Artificial Intelligence Technology in Drug Law Enforcement in Nigeria. The paper will highlight the overview of drug trafficking in Nigeria and the inherent challenges of National Drug Law Enforcement Agency as well as the application of Artificial Intelligence technology as a tool in fighting the menace of drug trafficking in Nigeria. Thematic method of data analysis was employed in this study, with focus on drug trafficking and Nigeria's international image, Analysis of the Nigerian Drug Law Enforcement Agency Act, Artificial Intelligence techniques and the role of Artificial Intelligence in the fight against drug trafficking. NDLEA will find the study beneficial in its fight against drug trafficking. The study will proffer solutions to the use of technology in tackling drug trafficking in Nigeria.

Key words- Drug traffickers, Outlined drugs, Artificial intelligence, law enforcement agencies

Introduction

Drug trafficking has become a major problem in Nigeria and is increasing day by day. It is especially rampant among the youth. The menace of drug trafficking is known all over the world especially in Nigeria, where drug trafficking has become a major source of instability in the world and they use various means to transport their cargo in the lucrative drug business. Planes, ships, animals, catapults, sandbag bridges, tunnels and people (mules) are some of the most common means used by drug traffickers to transport dangerous goods around the world. These drugs aren't cheap, but they are in high demand around the world, so offers from unscrupulous dealers who trade with them are always high. (UNODC, 2010; Maqbool, 2014).

Drugs such as cannabis, cocaine, heroin, amphetamine, ephedrine, and psychotropic substances are commonly patronized drugs in Nigeria, these drugs enter the country and are distributed to Nigerians of different socio-economic, religious and cultural background. Drugs such as cocaine and heroin are not produced in Nigeria, however, the drugs are in high demand, and the quantity in circulation is heartbreaking.

Nigeria is known as a transit nation due to its strategic geographical location and unpoliced land borders this makes it possible and easy for the conveyance of illicit drugs from source countries to consuming nations. Thus, Nigeria provides the missing link between producing countries of these drugs and the consuming nations of the world (Adeniyi, 2016).

Available records of arrest with the Nigeria Drug Law Enforcement Agency (NDLEA, 2022) indicate that there has been an exponential and steady increase in the number of persons arrested for drug trafficking-related offences.

Data further revealed that the youths between ages 16 to 40 years constitute the high-risk group for drug trafficking in the country and the desire to make quick money, peer group influence, and ignorance have been identified as the major predisposing factors to drug trafficking.

Drug merchants who operate in syndicates bring these drugs into the country. These syndicates have been categorized into four specific specialties in Nigeria as the procurement syndicates based in sources countries; courier syndicates involving low ranking human carriers of various nationalities; overseas distribution syndicates which handle the sales at the final destination where they are consumed and local merchandising syndicates, which specialize in bringing in drugs from source countries and sell to other local syndicates that ferry those drugs abroad (NDLEA, 2022)

Nigeria Anti-drug agency, the National Drug Law Enforcement Agency (NDLEA) uncovered a cocaine warehouse in Lagos state where 1.8 tons (1,855 Kilograms) of cocaine worth two hundred and seventy-eight million, two hundred and fifty thousand dollars (\$278,250,000) were stored (The Guardian, 2022).

Barely three months before the discovery, four hundred and forty-three (cartons) of Tramadol Hydrochloride worth over thirteen million four hundred and fifty one thousand, four hundred and sixty (13,451,466) pills of Tramadol 225mg was uncovered and seized in a residential mansion used as a drug warehouse in Lekki, Lagos state, Nigeria (Premium Times, 2022).

The trends of drug trafficking in the Sub-region indicates a significant change in the trade from a mere transit route for drugs (from Central and South America moving to the European markets) to a commercial and repackaging hub with a well-established network of smugglers and crime syndicates has been linked to the more robust U.S anti-narcotics response strategies that have clamped down on the Latin American drug syndicates on U.S routes as well as their desires for meet up with rapidly growing European market.

Addressing drug trafficking poses a monumental challenge, accompanied by considerable costs and various risks, encompassing regulatory and reputational risks. To be disconnected from information is to cease to exist (Enemuo, Ezeanyi & Ezeaka 2019).

The responsibility of mitigating these risks lies with the National Drug Law Enforcement Agency. Furthermore, drug traffickers persist in refining their trafficking methodologies, identifying, and exploiting vulnerabilities in the system to facilitate the movement of illicit drugs. The drug traffickers cartel has been replicated in new technology era, investigating it requires a new methodology and new tools such as artificial intelligence (AI).

In essence, AI's role in drug trafficking is to deliver a more sophisticated and automated mechanism for identifying and preventing drug trafficking, while alleviating the operational burdens on Nigeria Drug Law Agency (NDLEA). It is against this background that the paper investigates application of Artificial intelligence in Drug enforcement.

Review of Literature

Overview of Drug Trafficking in Nigeria

United Nations Office for Drugs and Crime defines illicit drug trafficking as a global illicit trade involving the cultivation, manufacture, distribution and sale of substances which are subject to drug prohibition laws (UNODC,2017). These drugs include cocaine, heroin, morphine, cannabis, crystal methamphetamine, and non-pharmaceutical use drugs such as pain-killers and cough mixtures with codeine and sleeping pills. (Degenhardt & Hall, 2012).

Illicit drugs are classified in the various forms in which they can be found and the effects they exude on the victims; they can occur naturally such as with marijuana (cannabis) or cocaine; they can be prepared from naturally occurring substances, such as the case with heroin; or they can be totally synthetic, as in the case with amphetamines and most other prescription drugs. Similarly, their effects are classified into four major types: stimulants, depressants, narcotics and hallucinogens (Houck & Siegel, 2010). The effects associated with these drugs made them a global health issue, as it represents the largest volume of criminal cases that are examined by forensic science laboratories across the globe (Houck & Siegel, 2010).

The issue of drug trafficking is not new to Nigerians and the international community. Rotimi (2011) explained that in the 1950s, drug trafficking was restricted to a few Nigerians who had travelled abroad and returned, especially those who had taken part in World War II; unfortunately, from the early 1980s to the present time, drug trafficking involving narcotics (cocaine, heroin, etc.) has been observed at alarming proportions. Nigerians are now indulging in national and international drug trafficking. Drug abuse can lead to anxiety, confusion, insomnia, mood swings and violent behavior from user (Nwammuo, Ezeaka, Anunobi, Ozumba & Aghaebe, 2023).

In Nigeria, there is drug trafficking from one state to the other, from one community to the other, from one compound to the other. Drugs being trafficked nationally include tramadol, heroin, marijuana, and Mkpuru mmiri, among others. Internationally, Nigerians have gained a reputation for trafficking in drugs through airport in Nigeria and also in their destination countries. Drug abuse is a prevailing global public health concern which has been identified to have diverse and devastating effects in the society (Ezeaka, Nwodu & Agbanu 2022).

Trafficked drugs include cannabis, cocaine, heroin and tramadol. Unfortunately, 'cannabis is cultivated in different parts of the country and there is evidence of methamphetamine producing laboratories' (Olusola 2021) and is also used by '10.6 million Nigerians, which is the most commonly used drug, followed by opioids with 4.6 million including tramadol' (Nwosu 2021).

With the increasing poverty rate, insufficient maritime and border security, and a recurring lack of maritime and border security, illicit drug trafficking and related activities became a major concern in Nigeria. This created an environment that allowed drug cartels to thrive and seek safe haven. Illicit drug trafficking has been classified in Nigeria as one of the most important networks of organized crime. It is a propellant that perpetuates criminality, increases health risk, weakens rule of law, causes crime, and makes conflicts more deadly. The illegal drug trafficking in organized crime has surpassed the borders of traditional state territory, posing grave security concerns. The complex web of operations created by drug lords, including cartels and syndicates, is both local and international.

Impact of Drug Trafficking in Nigeria

Drug trafficking have a significant impact in Nigeria. Among which are-. **Socio-Economic Impacts:** Drug trafficking undermines socio-economic development by promoting corruption, violence and instability. It fuels organized crime, hinders economic productivity and diverts resources from vital sectors such as health and education.

Security Threat: Drug transportation and distribution is often linked to organized crime. In some cases, drug money is used to fund terrorist groups, posing a threat to the security in Nigeria .

Nexuses are formed between drug traffickers, arms smugglers and terrorists, endangering national security. In the long run, it fuels inter-communal conflicts and weakens the law enforcement system of the country. Criminal drug networks destabilize countries, manipulate government institutions and impede enforcement of law and order.

Outlined Drugs trafficked in Nigeria

According to Foster (2018), the most commonly traded drugs in Nigeria are cannabis, cocaine, heroin and amphetamine-type stimulants, with inhalants and solvents such as glue and marijuana also consumed.

Cannabis (Marijuana)

According to Nwannenaya, et al (2017), this mild hallucinogen derived from the cannabis plant is the most commonly abused illegal drug in Nigeria. When consumed, usually through smoking, marijuana acts as a stimulant of the central nervous system. "It increases the heart rate and blood pressure. Because it is so stimulating to the nervous system, some people who consume marijuana may become paranoid. At the same time, marijuana can dull memory, making it difficult to concentrate and remember things."

Cocaine

Cocaine is a powerful, addictive stimulant that produces a euphoric feeling when taken, but may or may not make some people feel good. "Some people find the high very pleasant, while others dislike it. The high is short-lived, lasting between 30 and 45 minutes (Nwannenaya, et al (2017). Cocaine is usually snorted as a powder, but it can also be smoked in the form of a rock known as crack. Cocaine constricts blood vessels and increases heart rate, and these cardiovascular effects are the primary cause of most cocaine-related deaths.

According to Smith (2014), even small amounts can be fatal, and sudden death is not uncommon.

Opiates

These drugs, which include both street drugs such as heroin and pharmaceutical painkillers such as morphine, act on the body's central nervous system by stimulating the brain's reward center, which controls the feeling of pleasure. Opiates mimic the effects of healthy, pleasurable activities such as sex and eating. However, taking large amounts of opiates can slow or stop some of the brain's vital functions, such as breathing. In case of an overdose, the brain switches off the "thermostat" that controls breathing. The person goes into a coma and dies.

Methamphetamine.

This powerful stimulant is a white powder that is usually smoked, inhaled or injected and is highly addictive. According to Nwannenaya, et al (2017) like cocaine, methamphetamine can increase the heart rate and cause hyperthermia, a very high body temperature. Long-term use of methamphetamine can cause psychotic symptoms such as anxiety, insomnia and even

hallucinations. Serious dental problems can also occur. Because the drug is acidic, it can wear down the teeth over time. Users also often grind their teeth, which further damages the teeth. Like heroin users, people who inject methamphetamine are at risk for HIV and hepatitis.

Tramadol

Tramadol is a prescription opioid painkiller known for its moderate pain relief. Tramadol has the potential for abuse as a narcotic painkiller and can be dangerous if taken in large amounts, and people who misuse or abuse tramadol are at risk of becoming addicted. In some cases, even those who follow their doctor's instructions may become addicted. Medical studies have found that prolonged or frequent use of tramadol can lead to tolerance to the drug (; WHO, 2020). This means that larger doses need to be taken to feel the effects of the drug. People who take tramadol claim to feel relaxed and happy, but higher tramadol doses may increase the risk of serious side effects such as seizures and respiratory depression. tramadol can cause a fatal overdose that reduces lung and heart function or leads to respiratory spasms (Nakhaee et al., 2021). For people with suicidal tendencies, this drug can be deadly.

Brief History of NDLEA

With the military government's determination to combat and curb illegal drug trade or smuggling in the country, Decree No. 48 of 1989 to curb drug trafficking and smuggling was promulgated on December 29, 1989, establishing the National Drug Law Enforcement Agency (NDLEA) to curb its increase in society.

Targba (2020), The National Drug Law Enforcement Agency (NDLEA) was established by the Federal Government with the primary objective of prohibiting the manufacture and sale of illegal drugs in Nigeria, and the agency also claims to be the largest drug enforcement agency in Africa. The agency is responsible for investigating cases related to drug smuggling, discovering and punishing drug traffickers. The agency plays a key role in the interception of drug trafficking and enforcement of drug laws at airports, seaports etc, destruction of drug plants and drug substances, investigating the financial benefits derived from drug trafficking, drug research, and works to educate the public on the effects of drug abuse. and educate on drug abuse (Chime, 2023).

Function of NDLEA

The Nigerian Drug Law Enforcement Agency is saddled with precise roles with a purpose to address drug trafficking. Below are a number of them anywhere:

1. Prevention of Illicit Trafficking of Hard Drugs Prevention of illicit peddling of stimulants, inclusive of, the narcotic drug turned into one of the features assigned to the Nigerian Drug Law Enforcement Agency. So, the number one duty of the Nigerian Drug Law Enforcement Agency turned into to make certain that it enacted a few measures with the motive of preventing drug motion inside and round Nigeria`s borders.
2. Traces and Seizes Financial Proceeds from Drug Businesses Another function of the National Drug Law Enforcement Agency is to make certain that, it tests and follows the monetary waft of drug businesses. It is incumbent at the function of the National Drug Law Enforcement Agency to locate monetary proceeds that received drug-associated change and wrongdoing, and, study and confiscate such monetary proceeds.
3. Eradicates Narcotic Plants and Substances In maximum cases, it's miles really useful that the Nigeria Drug Law Enforcement Agency begin its obligations from the pinnacle of the chain. It is one of the features of the Agency to ensure that, it eradicates the unlawful developing of opiate plant life as properly as, the ones different substances.
4. Partnering with worldwide groups to combat drug trafficking Though a federal corporation, the corporation has worldwide obligations. Its function is to oversee all sedative-associated affairs each inside and outdoor Nigeria and impose worldwide drug legal guidelines.
5. Informing the general public The NDLEA informs the overall public approximately sedative substances; peril and abuse. They reveal public locations inclusive of seaports, airports, and borders to prevent the importation and exportation of tough drugs.

Challenges of National Drug Law Enforcement Agency (NDLEA)

The NDLEA is responsible for monitoring the cultivation, processing, sale, export and trafficking of hard drugs and curbing the menace of drug abuse, but it has not faced any problems in its operations. The challenges associated with the NDLEA's counter-drug trafficking operations are mainly attributed to lack of funding, poor equipment and tools, logistics, lack of training, inadequate staff support, and low morale (Adikwu, 2023). The fact is that a security agency as sensitive as the NDLEA cannot effectively fight crime, conduct result-oriented policing operations and execute its mandate when challenges such as dysfunctional equipment, lack of operational vehicles, modern equipment for effective surveillance and intelligence, rallies, etc. are not addressed (Adikwu, 2023). The agency uses commercial motorcyclists to assist in tracking fully armed and dangerous drug traffickers, but it has often gone futile. This has become a major drawback in counter-drug operations. Using public transport places agents at high risk and has unfortunately resulted in many

agents losing their lives in the line of duty. This often leads to low morale among staff performing this demanding job. There are poor employee benefits, with promotions delayed or denied. There has been a backlog of eight to ten years for promotions. Where promotions have taken place, they have been alleged to have been done with disregard for guidelines and regulations (Adikwu, 2023). There has been a challenge in developing comprehensive, modern rehabilitation centres to treat cases of drug addiction and to enable drug addicts to be properly treated and reintegrated back into society, to be able to support themselves and contribute meaningfully to the growth and development of the community and the country as a whole.

Overview of Artificial Intelligence in Nigeria

Artificial intelligence can be described as a simulation of the human mind that allows computers to think and act like humans by performing tasks such as learning and problem solving (Zhang & Lu, 2021). Machine learning is used to build systems that improve through data and experience, advancing various fields such as autonomous systems, natural language processing, computer vision, and the medical field (Jordan & Mitchell, 2015).

In Nigeria, artificial intelligence is opening up opportunities in areas such as education (Sanusi et al., 2022), security (Falode et al., 2021), energy (Mobayo et al., 2021), and health (Anazodo et al., 2022). However (Mobayo et al., 2021;) have highlighted a number of emerging challenges that limit the adoption of AI in Nigeria, including: B. Awareness, knowledge of the subject domain or system, sufficient power supply, computing power, and trust in the AI system. These shortcomings could be addressed by technical conditions such as data, algorithms, and computing power. These conditions have had a positive impact on various industries such as healthcare, retail, automotive, and finance in other parts of the world (Zhang & Lu, 2021).

Artificial Intelligence has widespread applications in many fields and can be used to track criminals and their activities. Digital personal assistants built into modern mobile phones and computer operating systems rely on AI technologies for tasks such as online searches, recommendations and voice interpretation. Automated personal databases, i.e. databases of digital information (images, fingerprints, insurance details, vehicle registrations, etc.), are managed using AI tools. This is a vast source of reference data for government security agencies and agencies such as the National Drug Law Enforcement Agency.

Theoretical Framework

This study is premised upon the Technological Determinism Theory and Social Responsibility Theory. These theories provide the most appropriate framework for the study's intent to establish how artificial intelligence can be used to improve the efficiency of National Drug Law enforcement in its fight against drug trafficking. The technological advancements introduced in artificial intelligence like computer speed, data collection, data storage, face recognition, pattern development and algorithms have led to a rapid increase in the human-like intelligence degree presenting opportunities for the efficient use of technology to curb the menace of drug trafficking by National Drug Law enforcement Agency.

Technological Determinism Theory

The Theory of Technological Determinism was Marshal McLuhan's idea introduced in 1962 based on the article; "Gutenberg Galaxy; The Making of Typographic man. The theory observed that new media technologies in communication would soon determine social changes, turning the world into a global village. He believes socio-political, economic and cultural changes are inevitably based on development and diffusion of technology. McLuhan argued technology undoubtedly causes specific changes on how people think, how society is structured and the form of culture created. Communication is the basic tenet of technological determinism theory. The theory seeks to explain social and historical phenomena in terms of the principal determining factor (Technology). The theory states that communication technologies in general are the prime causes of changes in society.

According to Ike (2015), the theory also states that "technology shapes how we, as individuals in the society think, feel, act and how our society operates as we move from one technological age to another (Tribal age, Literate age, Print age, Electronic age, Computer age)". Technological determinism theory partially explains contemporary persuasion. It implies that the technology of any given era is the major determinant of the cultural patterns of that era. Larson (1992) captures Marshal McLuhan's controversial technological determinism theory as he puts it: "the message of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs" or, in briefer terms, "the medium is the message".

This is a clear indication that technology and further innovations can affect human behavior and alter changes in their ways of doing things. It extends to mean that the communication idea moves from being a complete responsibility of the encoder to being a holistic function of the media and their audience. The technology of Artificial Intelligence that has made a growing phenomenon of our time, including computers, laptops, smart phones, to name a few, provides us with access to a

pool of common information and experience using a combination of text, pictures, motion, sound and other effects to create messages for different purposes.

Social Responsibility Theory

The social responsibility theory is an offshoot of libertarian theory. The theory sprang up in the middle of 20th century. Asemah (2011) describes it as a modern theory because it was born in the twentieth century. According to McQuail (1987), the social responsibility theory owes its origin to an initiative- Commission on Freedom of the Press. Its main impetus was a growing awareness that in some important respects, the free market had failed to fulfill the promise of the press and to deliver expected benefits to the society. The theory has a wide range of applications, since it covers several kinds of private print media and public corporations of broadcasting, which are answerable through various kinds of democratic procedures to the society. The theory has thus tried to reconcile independence with obligations to society. McQuail (1987) outlines the principles of the social responsibility theory as:

- i. media should accept and fulfil certain obligations to the society;
- ii. these obligations are mainly to be met by setting high or professional standards of information, truth, accuracy, objectivity and balance;
- iii. in accepting and applying these obligations, media should be self-regulating within the framework of law and established institutions;
- iv. the media should avoid whatever might lead to crime, violence or
- v. civil disorders or give offence to minority groups;
- vi. the media as a whole should be pluralist and reflect the diversities of
- vii. their society. Giving access to various points of views and granting all the right to reply;
- viii. society and the public, following the first named principles, have a right to expect high standards of performance and intervention can be justified to serve the public good; and
- ix. journalists and media professionals should be accountable to society as well as to employers and the market.

The concept of public interest inexplicitly lies at the heart of the definition of the social responsibility theory. This highlights the crucial role of the communications sector in shaping societal processes: the formation of public opinion and civil society movements. The theory is relevant to the study because it calls for responsibility on the part of National Drug Law Enforcement Agency (NDLEA) on issues relating drug trafficking in Nigeria. Thus, National Drug

Law Enforcement Agency (NDLEA) should be able to use the mass media in its fight against drug trafficking in Nigeria.

Application of Artificial Intelligence in Drugs Trafficking Law Enforcement

Traditional methods of predicting drug trafficking are often based on statistical models and expert knowledge, which may not capture the complex patterns and dynamics of drug trafficking. To address these challenges given the financial and human resource shortages faced by the NDLEA, advanced machine learning techniques such as artificial intelligence are used to analyse large and diverse datasets, enabling accurate and timely predictions.

AI technologies have proven useful in collecting and analyzing intelligence. Planned crimes like those in Nigeria require planning and information sharing, but with increased access to the internet, clues and leads are readily available. AI tools can help evaluate this data and track trends. Intelligent analysis of the collected data will help in identifying drug cartels and their activities and their links to crime. Identifying trends in drug trafficking will generate further investigative efforts. However, due to the complexity and large volume of data, this is often difficult, but artificial intelligence can be used to track investigations and enforcement.

The National Drug Law Enforcement Agency, with limited resources and time, can leverage artificial intelligence in its crackdown on drug trafficking in Nigeria, which could act as a force multiplier and help the NDLEA overcome various challenges in conducting investigations. Areas where NDLEA can use artificial intelligence in drug law enforcement;

Monitoring Dark Web Marketplaces Artificial intelligence combined with Web Intelligence (WEBINT) helps drug trafficking investigators search from dark web forums advertising drug markets to the dark web marketplaces themselves. This technological approach uses complex keyword searches based on custom search parameters including the name of the marketplace, the name of the drug (which may be an internal term), the country of origin and shipping destination of the product, etc.

In this context, AI helps to automate the search process and improve the efficiency and accuracy of investigators. In addition, natural language processing, a branch of AI, can examine datasets and extract new keywords, further improving the search process (Johnmichael, 2021)

Speeding up the investigative process

Speed is a key factor in any investigation. Artificial intelligence accelerates the process and provides analytical capabilities. AI-powered searches not only span the dark web, but can also retrieve data from superficial websites to shed further light on the pharmaceutical supply chain. Running such comprehensive searches manually would require significant manpower and time.

Rapid Unmasking of Threat Actors and Networks

AI-powered investigative capabilities help quickly and accurately identify and neutralize threat actors and expose their accomplices throughout the drug trafficking chain. Artificial intelligence helps correlate data fragments uncovered in drug trafficking investigations, such as phone numbers, photo metadata, online handles, and IP addresses, to establish identities. And once the first attacker is identified, social network analysis helps uncover others (Johnmichael, 2021)

Searching for clues about drug-related activity on the internet

Another benefit of using artificial intelligence is that it can find data on the internet that is important to an investigation. While the majority of drug cartels operate on the dark web, some of them may also find their way onto the surface web. For example, some darknet marketplaces promote onion extensions through traditional social media. Photos used to advertise drugs on the dark web may also be present on the surface web. If threat actors have not deleted the interchangeable image file format data of the photos, investigators can obtain useful information such as timestamps and geolocation (Johnmichael, 2021)

The precision and accuracy of Artificial intelligence helps drug trafficking agency like National Drug Law Enforcement Agency gather reliable data that enable level of confidence for investigations. When reliable data is available, law enforcement agencies can conduct due diligence to go after the right threat actors and ensure the data can be used as evidence in court. Verified data enables authorities to build cases against actors in the pharmaceutical supply chain. The quality of this data leads to prosecutions and increases prosecution rates.

Improved border security and customs management

Corruption at border crossings is a significant challenge for Nigeria. Artificial intelligence can be used to enhance border security and customs control by automating processes such as cargo inspection and document verification. AI-powered systems can quickly identify discrepancies and

flag suspicious shipments, minimizing opportunities for corruption by reducing reliance on human intervention.

Facial Recognition Technology:

AI-powered facial popularity generation may be applied to get accurate details of drug traffickers. By shooting and studying facial features, AI algorithms can affirm the identification of applicants, lowering the threat of identification fraud. This generation also can be used to evaluate the applicant's picturegraph with present databases to become aware of capability protection threats or people with a couple of identities.

Image and video evaluation:

AI-powered photo and video evaluation may be used to screen surveillance footage, become aware of people, and come across suspicious spots. This can be a useful resource in monitoring and apprehending drug traffickers in addition to figuring out their networks and assist structures.

Suspicious Activity Detection

AI-powered structures examine diverse statistics sources, which includes social media, monetary transactions, and verbal exchange styles to become aware of suspicious spots related to drug trafficking and facilitating early intervention.

Conclusion

Drug trafficking is a prime difficulty in Nigeria and the inefficiency of National Drug Law Enforcement Agency (NDLEA) saddled with the duty of curtailing drug trafficking has aided its spread however artificial intelligence has emerged as a brand-new capability way to fight drug trafficking.

NDLEA can apply Artificial intelligence in the means for investigating and disrupting drug trafficking activities. With the ability of Artificial intelligence in gathering full-size quantities of statistics and locating correlations enables NDLEA can be notified of the drug trafficking cartel and disrupt their spots.

Recommendations

The following recommendations were made;

1. National Drug Law Enforcement Agency should ensure they set up data centres where large repositories of digital information are stored, managed, and processed in special machines which are often laid out on a facility that requires significant amounts of energy to operate. Data centres and collocation services are the backbone of AI infrastructure because the information/data they contain are vital for training AI models.
2. There should legislative Act for NDLEA to adopt the use of Artificial intelligence in its fight against drug trafficking thereby ensuring that budget is created for NDLEA to cater for technology operations.
3. Non- Governmental agencies in collaboration with National Drug Law Enforcement Agency should be deliberate in supporting financially individuals to give awareness to the dangers of drug trafficking.

References

- Adeniyi, K.E., 2016. Unemployment and drug trafficking among drug suspects in NDLEA custody, Cross River State Command, Nigeria. Unpublished M.Sc. Thesis Submitted to the Department of Sociology, University of Calabar, Calabar.
- Adikwu, S. E (2023) Reforming NDLEA For A Drug-free Nation; Retrieved from <https://leadership.ng/reforming-ndlea-for-a-drug-free-nation/>. May, 31, 2024
- Anazodo, U. C., Adewole, M. & Dako, F. (2022). AI for Population and Global Health in Radiology. *Radiology: Artificial Intelligence*,
- Chime, V. (2023). Marwa: NDLEA recorded 2, 346 convictions in 2022- the highest in agency's history. Retrieved from <https://www.thecable.ng>. May, 31, 2024
- Degenhardt, L & Hall, W. (2012). Extent of illicit drug use and dependence, and their contribution to the global burden of disease. *Lancet*. 379. 55-70.
- Enemuo, C.J., Ezeanyi, B.C. & Ezeaka, N.B.(2019). Extent of Information Communication Technology (ICT) Integration among Students in Tertiary Institutions in Anambra State. *International Journal of Education and Research* (7) 7 75-84
- Ezeaka, N.B., Nwodu, E.G. & Agbanu, V.N. (2022). Awareness and Attitude of Undergraduates to Drug Abuse and Addiction in Anambra State. *Mass Media Review* 5(1) 99- 108

- Falode, A. J., Faseke, B. O., & Ikeanyichukwu, C. (2021). Artificial Intelligence: The Missing Critical Component in Nigeria's Security Architecture. *LASU Journal of History and International Studies (LAJOHIS)*
- Foster, P. (2018): Men and Health Care Industry: An unhealthy Relationship? *Open University Press*
- Houck, M.M. and Siegel, J.A. (2010). Fundamentals of Forensic Science, Second Edition. *Faculty Book*, 83.
- O'Hare, Johnmichael (2021) Using AI to overcome the challenges of investigating digital narcotics supply chains. Retrieved from: <http://www.police1.com/police-products/investigation/drug-enforcement-software/articles/using-ai-to-overcome-the-challenges-of-investigating-digital-narcotics-supply-chains-CB8DekvGssjJYcm7/> May, 31, 2024
- Jordan, M & Mitchell, T.M.. (2015). Machine Learning: Trends, Perspectives, and Prospects. *Science (New York, N.Y.)*. 349. 255-60. May, 31, 2024
- Maqbool, T., 2014. Drug trafficking: A non-traditional security threat to national security of Pakistan. Islamabad Institute for Strategic Studies Research and Analysis. Pakistan (ISSRA). Retrieved on May, 31, 2024
- Mobayo, J. O., Aribisala, A. F., Yusuf, S. O., & Belgore, U. (2021). Artificial intelligence: Awareness and adoption for effective facilities management in the energy sector. Retrieved on May, 31, 2024
- Nakhaee, S., Hoyte, C., Dart, R.C. et al. (2021). A review on tramadol toxicity: mechanism of action, clinical presentation, and treatment. *Forensic Toxicol* 39, 293–310.
- NDLEA, (2022) National drug law enforcement agency. Annual Report. Federal Ministry of Justice, Federal Ministry of Justice. Retrieved on May, 31, 2024
- Nwammuo, A.N., Ezeaka, N.B., Anunobi, C., Ozumba, E. & Aghaebe, S. (2023). Creating Awareness of the Health Hazards of Mkpurummiri among Youth: The role of the Mass Media. *ANSU Journal of Arts and Social Sciences (ANSUJASS)* 10(2)
- Nwannenaya, C. & Abiodun, T.F., (2017). Illicit drug trafficking in Nigeria: Obstacle to national development and security', *Journal of Political Sciences and Public Affairs* 5, 230.
- Nwosu, A., (2021) 'Nigeria now a transit country for drug trafficking – Marwa', *Daily Post*, , from <https://dailypost.ng/2021/04/16/nigeria-now-a-transit-country-for-drug-trafficking-marwa/>. Retrieved on May, 31, 2024
- Olusola, O., (2021). Marwa: NDLEA has destroyed thousands of cannabis farms, 18 meth labs', *The Cable*, from <https://www.thecable.ng/marwa-ndlea-has-destroyed-thousands-of-cannabis-farms-18-meth-labs>. Retrieved on May, 31, 2024

- Premium Times. (3 October 2020). NDLEA Arrests Drug Baron, Recovers N9B Worth of Tramadol. <https://www.premuiumtimesng.com/news/top-news/55734-ndlea-arrests-drug-baron-recoverns9-billion-worth-of-tramadol-official.html>. Retrieved on May, 31, 2024
- Rotimi, A. [2011], 'Drug trafficking and penal policy in Nigeria', *International Journal of Comparative and Applied Criminal Justice*
- Sanusi, I. T., Olaleye, S. A., Agbo, F. J. & Chiu, T. K. (2022). The role of learners' competencies in artificial intelligence education. *Computers and Education: Artificial Intelligence*,
- Smith , P. (2014)The nursing process: raising the profile of drug patients on emotional care in care home', *journal of advanced Nursing. Nigeria. Calabar Oxford press.*
- Stacey, M. (2006): _The health service consumer: a sociological misconception', *Sociological Review Monograph 22, The Sociology of the NHS*. Blackwell.
- Targba B. (2020). A Brief History and Functions of NDLEA in Nigeria. <https://firstclassnigeria.com/history-and-functions-of-ndlea-in-nigeria/> Retrieved on May, 31, 2024
- The Guardian. (20 September 2022). <https://guardian.ng/news/ndlea-invades-cocaine-warehouseseizure-n193-billion-worth-of-crack-in-lagos/html>. Retrieved on May, 31, 2024
- UNODC, (2012). *Human Development Report*, New York: Oxford University Press.
- UNODC. (2017). *World Drug Report 2008*. United Nations Publication. <https://www.unodc.org/unodc/en/data-and-analysis/wdr-2008.html>.
- World Health Organization (2022). Tramadol, WHO Technical Report Series, WHO Expert Committee on Drug Dependence. Available from: <https://apps.who.int/iris/bitstream/handle/10665/260546/9789241210188-eng.pdf> (Retrieved on May, 31, 2024)
- Zhang, Caiming & Lu, Yang. (2021). Study on Artificial Intelligence: The State of the Art and Future Prospects. *Journal of Industrial Information Integration*.