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# Emerging Technologies in Law Enforcement

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## ABSTRACT

Technology impacts every aspect of the law enforcement profession and is constantly evolving. It plays a crucial role in modern law enforcement, helping officers work more efficiently, solve crimes faster, and keep communities safer. Law enforcement agencies are increasingly utilizing technology to enhance their capabilities in crime prevention, investigation, and community engagement. This includes artificial intelligence (AI), robotics, drones, big data, virtual reality, and other emerging technologies. These technologies are equally making their mark in policing and are aimed at improving officer safety, evidence collection, and overall efficiency. They make effective policing possible. The impact of these technologies is mixed. While they can enhance efficiency and effectiveness, there are unintended consequences. Continued public safety requires law enforcement officers to have all the tools to do their job, including the use and understanding of modern technology to better increase security and protection for the officers and the community. In this paper, we will highlight some emerging technologies in law enforcement or policing practice.

***KEYWORDS:*** *technology, emerging technologies, law enforcement, policing practice*

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## INTRODUCTION

Policing has been evolving for centuries and will continue to do so for centuries to come. Technology is transforming police work in the 21st century, introducing new tools to fight crime and new categories of crime to fight. With the rapid pace of technological developments, agencies are finding new and innovative ways to leverage these tools to enhance public safety, catch criminals, and save lives.

Continued public safety requires law enforcement officers to have all the tools to do their job, including the use and understanding of modern technology to better increase security and protection for the officers and the community. Law enforcement officers work daily to solve crimes, protect citizens, and keep the peace. They put their lives on the line to make sure that everyone feels secure and can go about their daily life with comfort in knowing that law enforcement is available to protect and serve the community. They are tasked with responding to issues involving violence, mental health issues, financial crimes, and much more. Law enforcement officers serve and protect. In order to do so, however, they need to have proper training and keep their finger on the pulse of the latest technology [1].

Law enforcement agencies face an evolving landscape of challenges, from data silos and outdated communication methods to operational inefficiencies that hinder public safety efforts. As technology rapidly advances, agencies are finding new ways to improve efficiency, communication, and data-sharing. The reality is that the technology involved in policing has evolved dramatically. From body-worn cameras and license plate recognition to artificial intelligence (AI)-based analytics and real-time crime centers, the tools and resources available to law enforcement are advancing at an incredible rate. As police technology grows, becoming both more advanced and more accessible, it is important for departments to understand how to deploy that technology effectively to better protect the communities they serve [2]. From body cameras and real-time communication tools to facial recognition software, these tools support transparency, improve response time, and aid in investigations. As technology continues to evolve, it

will continue to be an essential partner in building trust and improving public safety. Technology has become a cornerstone in the fabric of law enforcement, profoundly altering the landscape of public safety and policing strategies. Figure 1 shows a police logo [3], while Figure 2 shows the impact of technology on law enforcement officer [4].

## WHAT ARE EMERGING TECHNOLOGIES?

Technology may be regarded as a collection of systems designed to perform some function. It can help alleviate some of the challenges facing business today. Emerging technology is a term generally used to describe new technology. The term often refers to technologies currently developing or expected to be available within the next five to ten years. Any imminent, but not fully realized, technological innovations will have some impact on the status quo.

Emerging technologies are shaping our societies. They continue to affect the way we live, work, and interact with one another. Emerging technology (ET) lacks a consensus on what classifies them as "emergent." It is a relative term because one may see a technology as emerging and others may not see it the same way. It is a term that is often used to describe a new technology. A technology is still emerging if it is not yet a "must-have" [5]. An emerging technology is the one that holds the promise of creating a new economic engine and is trans-industrial. ET is used in different areas such as media, healthcare, business, science, education, or defense.

The characteristics of emerging technologies include the following [6]:

- *Novelty:* Emerging technologies are typically new or novel, meaning they have yet to be widely adopted or used. They often represent a significant departure from existing technologies or processes.
- *Potential for Disruption:* Emerging technologies have the potential to disrupt existing markets, industries, or ways of doing things. They may also displace existing businesses or industries.
- *Uncertainty:* Because emerging technologies are still in the early stages of development, there is often a high uncertainty surrounding their future potential and impact. It can be challenging to predict how they will evolve.
- *Rapid Change:* Emerging technologies often evolve rapidly, with new developments and innovations emerging frequently. It can make keeping up with the latest trends and advancements challenging.
- *Interdisciplinary*: Emerging technologies often involve multiple disciplines or fields of study, such as computer science, engineering, and biology. They may require collaboration across different fields and industries to develop their potential fully.

Emerging technologies are worth investigating. They are responsible for developing new products or devices. As emerging technologies continue to evolve, engineering is poised for a transformative future. Emerging technologies have driven innovation and progress in today's rapidly evolving digital landscape. The collective impact of emerging technologies such as artificial intelligence, machine learning, big data, and the Internet of things is undeniably transformative. Some emerging technologies are shown in Figure 3 [7].

## EMERGING TECHNOLOGIES IN LAW ENFORCEMENT

In a modern society, it is important to acknowledge the difficult job that law enforcement officers have; and as a part of that acknowledgement, it is important to properly equip officers so they can best face their challenges. While being physically fit and knowing how to use weapons are two of the biggest skill requirements in law enforcement, there are new skills that officers need now. They need technology-empowered training, which has several benefits. New technologies are rapidly developing to help officers do a better job. Popular emerging technologies used in law enforcement include the following [2,8-11]:

1. *Artificial Intelligence*: Artificial Intelligence (AI) is increasingly being leveraged to automate tedious tasks, enhance investigations, and improve decision-making. In recent years, law enforcement agencies have increasingly turned to AI to amplify their investigative capabilities. AI-driven tools can process large volumes of data in seconds, helping officers identify patterns, detect anomalies, and predict criminal activity. Artificial intelligence (AI) continues to redefine the landscape of modern police investigations, offering unprecedented tools to enhance crime-solving capabilities. From predictive policing to AI-enhanced video analysis, law enforcement agencies are increasingly leveraging these technologies. For example, data from an Alexa smart speaker has been used by a court in the US to assist in a double murder case. Automaker Ford has filed a patent for a self-driving police car equipped with artificial intelligence. These high-tech cruisers are designed to catch violators of traffic laws or impaired drivers by transmitting information to human officers.

2. *Robotics*: Robots are clearly useful in law enforcement due to their ability to go into dangerous situations. While society and technology probably are

not quite ready for a general-purpose Robocop, autonomous, mobile units will play an increasingly important part in a number of specialist roles in coming years. Robots are also used by security services and law enforcement for surveillance. The Robodog created by Boston Dynamics navigates using LIDAR and is equipped with thermal cameras to spot intruders even in the dark. We can be sure that many more interesting use cases of robots in law enforcement are likely to emerge. Many law enforcement agencies are now using next-generation robotic cameras to deliver visual and audio surveillance of potential crime scenes that may be too dangerous or too hard for officers to reach.

3. *Drones*: Drones, also known as unmanned aerial vehicles (UAVs), are increasingly being used by police to gain aerial vantage points for crime scene work, search and rescue efforts, accident reconstruction, crowd monitoring, and more. They offer aerial surveillance capabilities, allowing officers to assess situations from a safe distance and gather intelligence in real-time. Many police drones and UAVs are also equipped with zoom cameras, making them incredibly valuable for delivering actionable for "armed and dangerous" situations. For example, while more and more police departments across the country are deploying drones as eyes in the sky, the FBI reports they are also being used for criminal activities. Figure 4 shows police using drones [12].

4. *Computer Vision:* Computer vision has several significant use cases in policing. Perhaps most frequently, it is used for automatic license plate recognition (ALPR) to enable cameras to identify vehicles and their drivers. Computer vision is also being used in a new generation of lie detector devices, which work by analyzing microscopic movements in the eyes and face of the subject. It could soon even be used for Minority Report-style pre-emptive detection of crimes before they happen.

5. *Internet of Things:* Internet of things (IoT) devices such as video doorbells and voice assistants, with their ability to capture incidental goings-on in their environment, are increasingly becoming valuable sources of intelligence for officers and detectives searching for evidence. The ongoing expansion of the Internet of things (IoT) means more data is being generated, collected, and analyzed than ever before, much of which can be incredibly valuable in a law enforcement context.

6. *Cloud Computing:* Cloud computing has evolved at a rapid rate, and with the introduction of many new tools and services, law enforcement can expect to gain even more from this technology. It can be especially advantageous for law enforcement, resulting in reduced operational costs, compliance with federal policies, automatic software updates, cyber attack protection, and secure backup recovery. Cloud technology enables agencies to integrate with public safety databases to enhance the efficiency of investigations. Business continuity for law enforcement agencies during emergencies is critical, and possible with cloud hosting, by providing built-in redundancy and disaster recovery capabilities. This guarantees access to critical information when it is needed most. Cloud-based solutions improve interagency collaboration by enabling seamless data sharing. By adopting cloud-based platforms, agencies can overcome long-standing challenges related to data silos, outdated communication tools, and inefficient workflows. The future of law enforcement lies in cloud technology, AI-driven automation, mobile accessibility, and seamless data integration.

7. *Immersive Technology:* Virtual reality (VR) and augmented reality (AR) have a lot of exciting potential, which we are already seeing being put to use to make training and the day-to-day work of police officers easier. VR training for law enforcement provides a safe, immersive experience that simulates real-life behavior and scenarios as much as possible. AR is useful as it allows officers to remain aware of what is going on in their vicinity while augmenting their understanding of a situation with overlaid computer graphics. For example, in China, police officers have been using AR glasses that can identify suspects and those who are wanted for questioning.

8. *Digital Forensic Software*: Digital forensics is the scientific process of collecting, preserving, analyzing, and presenting electronic evidence in a way that is legally acceptable. This type of software is used to find, recover, and preserve digital evidence that is often associated with electronic crimes, such as credit card fraud or child pornography. It provides conclusive evidence in criminal investigations. But many non-electronic crimes also include digital evidence, such as bank account information, phone numbers, emails, text messages, and social media posts. Digital evidence management systems ensure the secure storage and retrieval of evidence, improving the accuracy and reliability of investigations.

9. *Facial Recognition Technology:* One of the more controversial emerging police technologies involves the use of facial recognition software. Across the country, local, state, and federal law enforcement and immigration agencies use face recognition systems to identify, track, and target individuals. Law enforcement agencies routinely use the technology to

compare an image from bystanders' smartphones, CCTV cameras, or other sources with face image databases maintained by local, state, and federal agencies. Face recognition presents a serious threat to First Amendment rights. AI-driven facial recognition technology has emerged as a game-changer in criminal investigations. People thought that this tool would be used unethically. Thankfully, that has not been the case, and facial recognition is proving to be an effective investigative tool. The goal of facial recognition software is that it will help improve safety and security in a number of instances. Some police departments in the United States, like the New York Police Department (NYPD), have explored and experimented with facial recognition technology and use of AI. NYPD officers were able to find and arrest a rape suspect within 24 hours of the attack using facial recognition software. Despite its effectiveness, facial recognition technology (FRT) has faced criticism regarding privacy issues and accuracy concerns. Figure 5 depicts facial recognition technology [13], while Figure 6 shows how the software works [14].

10. *Biometrics*: Police have been using fingerprints to identify people for more than a century. In addition to facial recognition and DNA, there is an ever-expanding array of biometric characteristics being utilized by law enforcement and the intelligence community. These include voice recognition, palmprints, wrist veins, iris recognition, gait analysis, and even heartbeats. The FBI has developed a database called the Next Generation Identification (NGI) system, "which provides the criminal justice community with the world's largest and most efficient electronic repository of biometric and criminal history information." Figure 7 shows fingerprints identification [13].

11. *Automatic License Plate Recognition* (ALPR): The same technology that enables toll collectors to automatically scan and collect the registration numbers and letters on your license plate to charge you a fee is now being used by police for a variety of law enforcement purposes, from identifying stolen cars to catching up with people who have active warrants or monitoring "Amber Alerts." The latest in ALPR technology combines optical recognition technology with AI, allowing law enforcement to reliably and consistently identify license plates. The reality that multiple cameras could be capturing images of the same license plate potentially gives police the ability to track a vehicle's movements over time, revealing details about an operator's whereabouts, which could obviously be helpful in catching criminals. With automatic license plate recognition (ALPR) technology, officers can easily scan license plates while on the field.

12. *Enhanced Body-Worn Cameras*: Body-worn cameras are small video recording devices worn by law enforcement officers usually attached to their uniform or chest. These cameras record video and audio of interactions between officers and the public during calls, traffic stops, arrests, and other incidents. Today, body-worn cameras are mandatory in many agencies and are growing increasingly advanced. This technology has also helped police departments be more efficient. Having an officer on every corner is neither feasible nor particularly desirable, but cameras that can detect and alert as events happen allow police to deploy resources more effectively. Video of police officers doing their jobs in challenging situations used to be rare; today it is ubiquitous, as seen in a number of high-profile incidents that have drawn intense public and media scrutiny. Some body-worn cameras are designed to better integrate with in-car systems to provide synchronized video of an event from multiple points of view. Figure 8 shows police officers wearing body cameras [15].

13. *Crime Prevention Technologies*: Crime prevention technologies refer to a range of tools and systems designed to deter, detect, or respond to criminal activity. These technologies can include surveillance cameras, alarm systems, predictive policing software, and smart city infrastructure. By integrating advanced technological solutions into law enforcement and community safety initiatives, crime prevention technologies aim to enhance public safety and reduce crime rates.

These are just some examples. Other emerging technologies include digital twin, wearable technologies, investigation technologies, corrections technologies, and gunshot detection systems.

## APPLICATIONGS OF EMERGING TECHNOLOGIES IN LAW ENFORCEMENT

Predictive policing, facial recognition, social media monitoring, AI-enhanced video analysis, and real-time crime analysis represent powerful tools, but their successful integration requires careful consideration of potential pitfalls and adherence to ethical standards. Emerging technologies in law enforcement can be applied in the following ways [16,17]:

- *Police Reports*: A small but growing number of police departments are adopting software products that use artificial intelligence (AI) to draft police reports for officers. Police reports play a crucial role in our justice system. They are central to the criminal proceedings that determine

people's innocence, guilt, and punishment, and are often the only official account of what took place during a particular incident. Some think police departments should not use this technology because it is unreliable and prone to making up facts. For these reasons, the ACLU (American Civil Liberties Union) does not believe police departments should allow officers to use AI to generate draft police reports.

- *Predictive Policing:* One of the most promising applications of AI in law enforcement is predictive policing. Predictive policing in artificial intelligence (AI) is when software uses data and algorithms to forecast criminal activity, with the goal of efficiently placing law enforcement resources. It empowers law enforcement to predict potential crime hotspots, ultimately aiding in crime prevention and public safety. Numerous cities across the United States have already adopted predictive policing tools. For example, the Los Angeles Police Department (LAPD) has utilized predictive policing technology to enhance their crime prevention efforts. The National Association for the Advancement of Colored People (NAACP) calls on state legislators to evaluate and regulate the use of predictive policing and artificial intelligence (AI) within law enforcement agencies. There is growing evidence that AI-driven predictive policing perpetuates racial bias, violates privacy rights, and undermines public trust in law enforcement. Use of predictive policing algorithms is shown in Figure 9 [13].
- *Smart City:* Smart city infrastructure will increasingly be built with functionality to assist with crime prevention and detection, such as controlling traffic lights to assist police and ambulance crews to quickly reach the scene of crimes or accidents. One network of devices that are specifically built to help tackle crime is ShotSpotter. This consists of an array of microphones attached to city infrastructure, such as street lights, that detect the sound of gunfire.

**BENEFITS**

Emerging technologies help to tackle the new forms of crime that are emerging as criminals become ever-more inventive in their own use of technology and data. Police chiefs and agency executives will need to understand the pros and cons to make informed recommendations on what technologies their departments and communities should be investing in. Other benefits of emerging technologies include [9,18]:

- *Technology Jobs:* Technology jobs are booming in practically every industry, and law enforcement is no exception. Technology jobs in policing include drone pilots, electronic surveillance officers, digital forensic investigators, real-time crime analysts, social media researchers, accident reconstructionists, etc. These types of job positions are available not only at sheriff's departments, police departments, and government agencies such as the Federal Bureau of Investigation (FBI), but also cities, states, and companies
- *Social Media Monitoring*: Law enforcement agencies are using social media to gather intelligence, communicate with the public, and address community concerns. Analyzing social media data can provide valuable insights into criminal activities, potential threats, and even the whereabouts of suspects. AI's integration with social media monitoring tools opens new avenues for law enforcement intelligence gathering. The Baltimore Police Department has used social media monitoring tools to gather intelligence.
- *Transparency*: Technology can be used to enhance transparency and accountability by providing the public with access to information about police activities. Body-worn cameras help provide a clear, unbiased record of interactions between law enforcement officers and the public, which can be used for transparency and accountability.
- *Enhanced Video Analysis:* This enables law enforcement to search video footage based on object attributes, making it easier to identify suspects or suspicious items. The analysis of video footage has traditionally been a time-consuming task for investigators. Police departments in various locations have explored the use of AI-enhanced video analysis for tasks such as surveillance, crime detection, and evidence gathering. The key advantage of AI-enhanced video analysis lies in its ability to uncover crucial details that may go unnoticed by human investigators. For example, NYPD has been known to test and deploy advanced technologies, including AI-enhanced video analytics, for public safety and crime prevention.
- *Crime Analysis:* AI facilitates real-time crime analysis by continuously monitoring various data sources for suspicious activities. This proactive approach allows law enforcement to respond swiftly to emerging threats and prevent crimes before they occur. Law enforcement agencies have explored the use of AI to enhance real-time

crime analysis to improve response times and resource allocation. For example, Los Angeles Police Department (LAPD) has explored the use of predictive policing technologies that incorporate AI for real-time analysis of crime data to identify potential hotspots.

- *Evidence Gathering:* The footage captured by body-worn cameras can be used as crucial evidence in criminal investigations and court cases. It helps document interactions that can support or dispute testimonies, providing a more accurate representation of events.
- *Training:* The next generation of law enforcement leaders will need a well-rounded training to meet future challenges. The recordings from body-worn cameras can be used in training officers and developing law enforcement policies. They provide real-life examples of how officers handle situations, which can be useful for improving response strategies and de-escalation techniques. Training should be given to all officers involved in the use or monitoring of emerging technologies to ensure they are aware of their equality and human rights obligations in the context of its use. Guidance and training should be provided to better prepare professionals working in policing and in other sectors that work closely with members of the police (e.g., social workers who work with the police in custodial and probation contexts) on how to write notes and input data to ensure greater standardization of practice. Figure 10 shows some officers in training [14].

## CHALLENGES

While emerging technologies present unprecedented opportunities for law enforcement, they also come with challenges and ethical considerations. The rise of powerful AI tools is already introducing new challenges for law enforcement that could easily compound their reputational issues. AI systems, particularly those trained on biased datasets, can perpetuate and amplify existing societal inequalities, leading to discriminatory outcomes in policing. They can be opaque and difficult to understand, making it challenging to determine how decisions are made and to hold them accountable. Law enforcement agencies need to develop clear policies and guidelines for the use of AI, addressing potential biases, privacy concerns, and accountability issues. Other challenges include [19,20]:

- *Privacy:* Privacy remains a central ethical concern in the use of AI for policing. Privacy concerns refer to the apprehensions and issues related to the collection, storage, and use of personal information by individuals or organizations. Governments and private companies have a long history of collecting data from civilians, often justifying the resulting loss of privacy in the name of national security, economic stability, or other societal benefits. Technologies like facial recognition and social media monitoring raise questions about individual privacy rights. The use of surveillance technologies raises privacy concerns, and it is crucial to implement safeguards to protect civil liberties. The use of AI in surveillance technologies raises serious privacy concerns, and the "black box" nature of some AI algorithms makes it difficult to understand and hold them accountable for their decisions. These technologies can enable mass surveillance, tracking individuals in public spaces and potentially violating their privacy rights.
- *Bias:* While AI tools aim to tailor law enforcement use of assets for efficiency and objectivity, there is mounting evidence and growing concern that they can increase racial biases. Algorithms used in facial recognition and predictive policing can be biased and may perpetuate existing inequalities, requiring careful monitoring, and mitigation. AI systems learn from the data they are trained on. If that data reflects past discriminatory practices or societal biases, the AI may perpetuate or even amplify those biases. This bias can lead to unfair and discriminatory outcomes, eroding public trust in law enforcement.
- *Discrimination:* Communities of color, and the black community in particular, are disproportionately affected by law enforcement. They face higher rates of surveillance, stops, and arrests- which will only increase due to biased algorithmic predictions. AI models can inherit biases from historical crime data, leading to discriminatory policing practices. Law enforcement executives must prioritize fairness and equity in the development and deployment of AI tools, actively working to mitigate biases and address algorithmic transparency. An equality and human rights impact assessment should form a compulsory part of the trial and adoption of any new technology policy.
- *Erosion of Public Trust:* Over-policing has already done tremendous damage and marginalize entire black communities. Law enforcement decisions based on flawed AI predictions can further erode trust in law enforcement agencies.
- *Collaboration:* The challenges facing law enforcement over the past several years have in turn challenged their appetite to digest other

perspectives. Continued collaboration between technology developers, legal experts, and law enforcement practitioners is essential to addressing emerging challenges and ensuring the responsible and ethical use of AI.

- *Ethical Considerations:* As law enforcement embraces the emerging technologies, ethical considerations become paramount. The use of AI in law enforcement raises broader ethical considerations about the role of technology in justice and fairness. It is crucial to ensure that AI is used ethically and responsibly, with a focus on fairness, equity, and transparency. Using AI to generate reports is at heart an ethical lapse.
- *Lack of Integrity*: Many chiefs have expressed concern that officers have started using AI for writing police reports and probable cause statements. Once you file such AI-created report, you lose the integrity of it, or at the very least the perceived integrity of it. If it is discovered that you used AI, it is no longer *your* report. Finding a way to cut corners and officers will never get better, while comprising their integrity at the same time.
- *Lack of Transparency:* The public is keenly aware that law enforcement has access to surveillance cameras, drones, and social media. This is why police departments will need to be more open with the public as to which data sources they are using, when, and why. Ensuring the explainability and transparency of AI tools becomes critical in legal proceedings. AI raises serious questions about transparency. Lack of transparency can hinder public understanding and trust in the use of AI in law enforcement. The proprietary nature of predictive policing algorithms does not allow for public input or understanding on how decisions on policing and resources are made.
- *Skills Gaps*: The use of AI requires specialized knowledge and skills, which may lead to skill gaps in police departments. The technological and social shifts currently facing police will likely require new skills from officers. To find those skills, departments may need to look to new sources of talent and create new systems for managing them.
- *AI-Enabled Crimes:* It is essential to recognize that the use of AI in criminal activities is a growing concern. As AI technologies advance, so do the capabilities of cybercriminals. AI technologies can be involved in various criminal activities. AI-enabled crimes, where malicious actors leverage AI for nefarious purposes, pose a significant threat. Deepfake technology, for example, allows for the creation of highly realistic but entirely fabricated audio or video content. Law enforcement executives must be vigilant in understanding the evolving landscape of AI-enabled crimes. The misuse of AI can lead to challenges in authentication and the admissibility of evidence in court.
- *Need for Modernization:* Some challenges have long impeded the efficiency and effectiveness of law enforcement, but technology is changing the game. Modern solutions are addressing these pain points, enabling agencies to operate more efficiently, share data securely, and respond to threats in real-time. By embracing new technologies, law enforcement agencies can move beyond outdated systems and embrace a future where investigations are faster, safer, and more effective.
- *Overreliance on Technology*: This can reduce human discretion and judgment in decision making leading to potential for automation bias and uncritical acceptance of technology outputs. Overreliance on tech, widening social control, and criminal adaptation are challenges that need addressing as justice systems modernize.

## CONCLUSION

Law enforcement technology is rapidly advancing, impacting nearly every facet of police work from crime prevention to evidence gathering. Artificial intelligence (AI), big data, extended reality, and all the most emerging technologies are equally making their mark in policing. These technologies give police officers and intelligence agencies unprecedented powers to crack down on criminal activity as they attempt to keep us safe. As police technology continues to evolve, law enforcement leaders have a powerful stake in staying well-informed about these advanced capabilities, both their positive impact on the safety of officers and the public, and the ethical questions involving rights to privacy.

Law enforcement is stepping into a high-tech future, driven by emerging technologies. Advancements in police technology have fundamentally changed how departments operate. As technologies advance, so do tech-enabled crimes, which in turn can lead to more modern crimes. Given the pace of advancing technology being used by criminals, officers have to be prepared to understand all the new technologies and how some of them are being used illicitly and which technologies can best aid their police work. The future of law enforcement will be defined by the adoption of cutting-edge technologies that address these longstanding obstacles. It lies in protecting law

enforcement officers. More information about emerging technologies in law enforcement can be found in the books in [21-25] and a related journal: *Journal on Emerging Technologies.*

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**Figure 1 A police logo [3].**


**Figure 2 The impact of technology on law enforcement officer [4].**

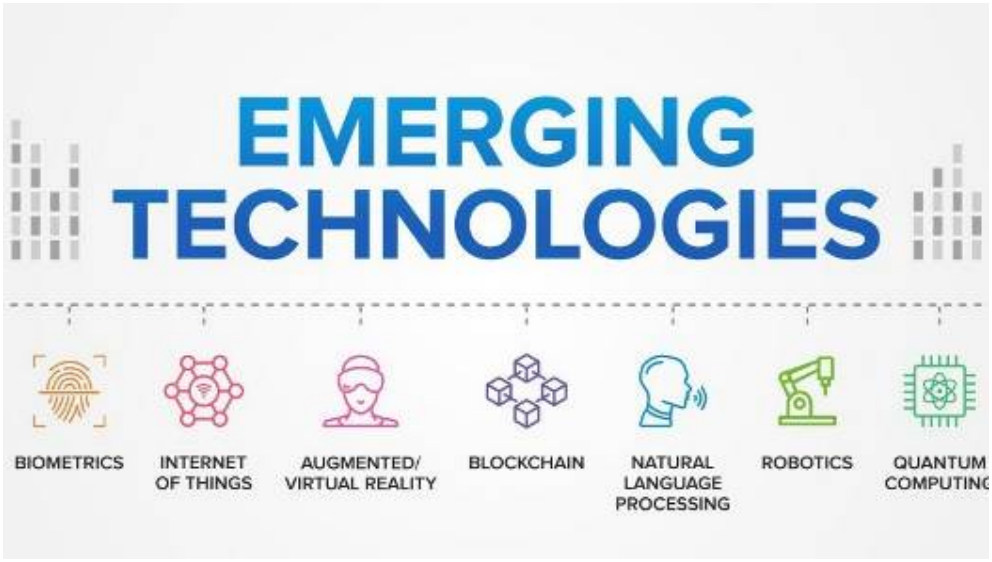


**Figure 3 Some emerging technologies [7].**


**Figure 4 Police using drones [12].**

**Figure 5 Facial recognition technology [13].**

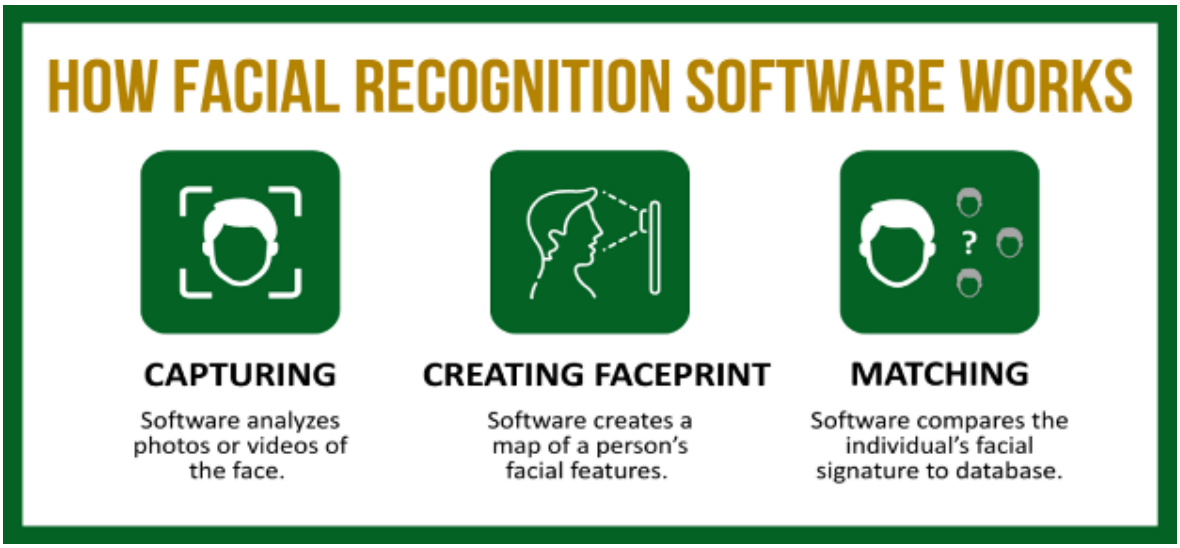


**Figure 6 How the software works [14].**

**Figure 7 Fingerprints identification [13].**

**Figure 8 Police officers wearing body cameras [15].**

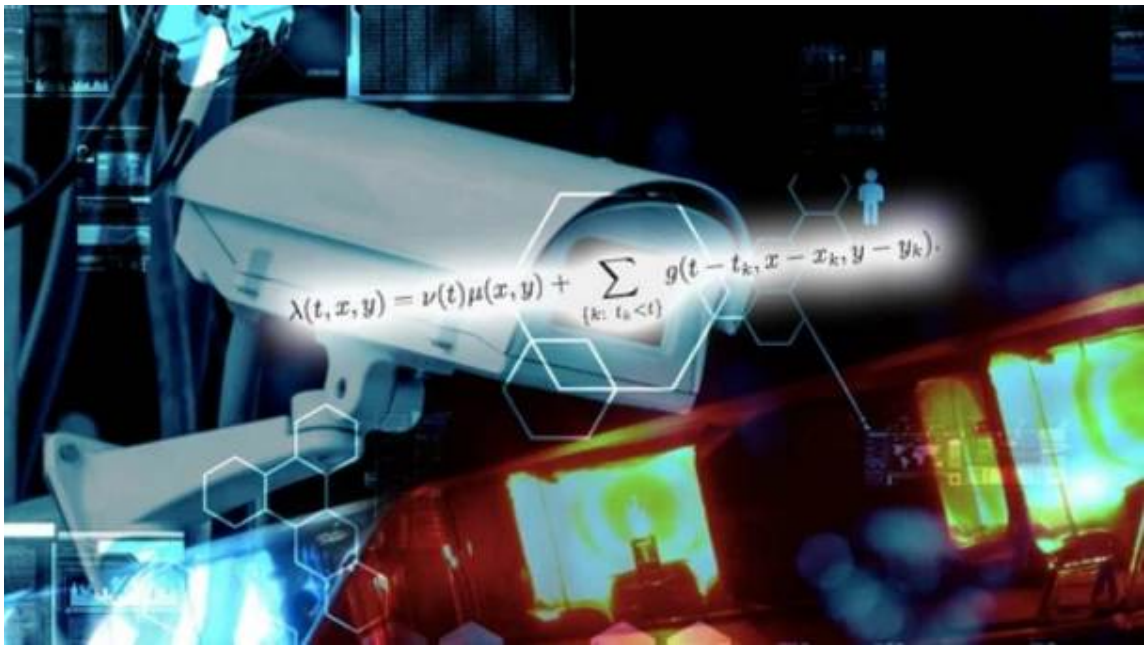


**Figure 9 Use of predictive policing algorithms [13].**

**Figure 10 Some officers in training [14].**