

Computer Technology Application In Criminal Justice

Posted on October 9, 2018

Introduction

The usage of computer equipment has massively increased since the late 1960s. There are a huge number of aspects that have powered this development. At first, physical labour was used extensively for crime-related work, and there was a practice of using a very small proportion of departmental resources for R&D in this field or scope. Interests changed in the 1960s when improvements in police department services were noticed, such as assigning dollars to gear and machinery. In 1968, the president changed recommendations from the Commission on Law Enforcement and the Administration. It was suggested that computer-based technology should be introduced to the police department. This may play a significant part in police work. Resources were provided by the Law Enforcement Assistance Administration (Colton, Kent W., 1979).

In today's world, many challenges are being faced in the field of crime analysis, especially in terms of the collection, visualization, and analysis of data in fighting crime. Details of criminals in terms of who they are, where they belong, what is their family background, who they communicate with, and how they are connected and linked with other groups is a very tough task to gather and analyze using traditional investigation approaches and procedures. In this world of crime and terrorism, it is very significant to collect information about the links and networks of every single suspect. It is also very important to collect information about the suspect's network members and their relationships with them, whether they are directly or indirectly related to each other. This will make it easy for criminal investigations; moreover, it will help generate concepts about suspects. However, sometimes, traditional procedures cannot be used to visualize and evaluate data gathered on the suspects. In the present time, where information technology plays a significant role in the daily life of every single person, it makes it easier to rely on information technology and digital systems in fighting crime.

Nowadays, reliable and effective systems, computer gears, applications, and well-equipped intelligent devices are being built to gather, investigate and understand criminal records in a real-time working environment. The need for such systems that can effectively and efficiently analyze the data regarding criminal activities and suspects is growing day by day in combat crime. These present systems and applications must be proficient in giving accurate results based on intelligence from basic or raw data. These applications must also have the capability of creating visual graphs, which will make it easier to generate new concepts about the suspects from the criminal records in order to understand and solve the crime functions easily.

Almost all societies in the modern world are disturbed by the day-by-day increase of criminal

activities in every aspect of life, whether it is cybercrime or physical crime. Sometimes, these activities are executed by a single individual, and sometimes, an organized group is involved in committing a crime. Crime rates are rapidly increasing and vary from one country to another or from one region to another. Solving criminal cases has always been the privilege of law enforcement specialists and [criminal justice](#). With the increase in the use of computer systems and applications to track crime, computer analysts and data examiners have already started working with law enforcement agencies and private detectives. This has increased the rate of solving crime. The most reliable and efficient way of fighting crime these days cannot be imaginative without the help of geographical reporting. Criminal actions all across the globe have become very complex in such a way that instant monitoring cannot be achieved without using intelligent devices and systems that can help law enforcement agencies graphically represent the crime (Quist, Aphetsi, 2013).

Crime investigation procedures are required to analyze the connected sequence of criminal cases to determine the most feasible area of the suspect's residence. Involving both qualitative and quantitative methods helps in developing an understanding of the spatial attitude of the suspect and concentrating the investigation on the smaller area of the community. Usually used in cases of murder, physical violence, and rape but also in suicide bombings, street crime, robbery, and other crimes. This strategy helps police officers and private detectives gather information on large-scale, complex crime investigations that usually involve hundreds or even thousands of suspects and ideas.

Detectives and police officers need to analyze the patterns of the whole case, and this task is crucial in fighting crime. Computer systems need to be ready to gather and capture information and perform different interpretation operations on it. In this interpretation, intelligence is used to control criminal activities and influence decision-making.

Applications nowadays are playing an important role in helping law enforcement agencies capture suspects in a matter of seconds and minutes, which was not even a matter of months at times. An iOS application named FbF mobile match performs its functionality in combination with the FbF mobile, which is one additional fingerprint scanning device distributed by LLC, Fulcrum Biometrics, and other authorized retailers. The application is used as a fingerprint gathering application, this is an actual fingerprint scanner application that works when a device is noticed by the application and does not take it as a normal application or a toy, this application is used for serious purposes by the agencies and police detectives. One should not download or install this application if one has not already purchased the FbF mobile One fingerprint device. This app, in no case, works without the FbF mobile device.

The mobile FbF device is authorized for use with all Apple devices like iPhone, iPad, and iPod touch. This application contains the Federal Bureau of Investigation authorized finger scanner that gathers FIPS-201 and PIV-licensed fingerprint photographs to an iOS device. It provides Actual fingerprint pictures that exactly meet the criteria of the high principles of law enforcement identification. This app permits users of the mobile app to gather HD images of the fingerprint, with a quality of up to 500 dpi and HD thumbprint pictures. Moreover, users are capable of saving the pictures to their

smartphone devices and sharing them with the help of email or posting them on an FTP server.

Another Law Enforcement Agencies app named MABIS plays an important role in helping detectives and law enforcement agencies to capture the suspects. In today's constant threat of terrorism, receiving real-time data about suspects is essential. QiSQi Identification Technologies developed the MABIS platform and app that can register and identify fingerprints, faces, and iris in a fraction of a second. The app runs on a standard or rugged Android mobile phone, which makes it easy and fast to deploy without special hardware investments. Armed with the mobile and touchless fingerprint biometrics software solution of Diamond Fortress, fingerprints are acquired by the mobile camera and deliver high-quality images. Face recognition has unique 2D/3D enhancement features, which deliver highly accurate information. With the implementation of iris recognition, MABIS is the first mobile phone to have all three major biometric identification algorithms. MABIS' backend is powered by a high-speed AFIS, Minex compliant, 2D/3D face recognition and iris recognition, both military and police-grade algorithms with proven track records. MABIS is secured by the SSL biometric access control, which manages and centralizes the administration of fingerprint, face, or voice verification.

A must for Police Forces, Border Control, Citizen and Immigration Services.

Computers play a big role in the criminal justice field. If we talk about computers, they have made it accessible for witnesses to look for the suspect's pictures on the computer screen. Only with the help of computers has DNA tests become possible, which is now the main source of identification between the innocent and the criminal in many cases. Computers take a short time in labs to process, and finding the real criminals from cases maybe 15 years ago can now be charged for their sins and misdeeds.

Mini-computers like laptops and notebooks are installed in police vehicles, which allows police officers to get the information they are looking for. They get the right information instantly instead of waiting to get back to the stations. Some new cars have wireless technologies and internet connections, making them even more reliable and convenient. This allows them to do great things in a matter of seconds.

As we have discussed before, Computers allow the use of fingerprint scanners and get the exact required information wherever required by the police department. Agencies can now take anyone's fingerprint from anywhere they want and process it to check whether it has any link with the criminal investigation or not (Hollywood, John, 2015).

Also, technology can be used for the cause of fire in any building, computers are used to process information whether it was fired by petrol, gasoline, kerosene, or lighter fluid the fire accident happened.

Computers are used at signals to measure traffic jams and make decisions according to the situation. Breaking traffic rules has become impossible for the audience, and technology has made so many advancements that a car can be tracked using a camera and be fined instantly. Stolen cars can easily be tracked nowadays, making it even more difficult for thieves to rob them.

So, there are a number of aspects in which technology plays a role in criminal justification. No matter which field we discuss, information technology has made things impossible things possible.

Works Cited

Kester, Quist-Aphetsi. "Computer Aided Investigation: Visualization and Analysis of Data from Mobile Communication Devices Using Formal Concept Analysis." *arXiv preprint arXiv:1307.7788* (2013).

Colton, Kent W., and James M. Tien. "Technology transfer of computer-based applications in law enforcement." *The Journal of Technology Transfer* 4.1 (1979): 63-76.

Hollywood, John S., et al. *Using future Internet technologies to strengthen criminal justice*. RAND Corporation, 2015.