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Automated Blood Pattern Analysis and Crime Scene Analysis

Like any branch of forensic science, blood pattern analysis is a tool used to discover facts related to a specific crime. Analyzing a blood pattern is more of an art than a science and an experienced analyst can infer many details towards solving the crime or identifying the assailant. This analysis can lead out to many important details such as

- Nature of weapon
- Nature of injuries suffered
- The time period in which the crime occurred
- Whether the assailant was left handed or right handed etc.

Blood pattern analysis and crime scene reconstruction have been followed for many years by criminologists to solve crimes. But modern technological advancements has brought with it many simpler and accurate ways of processing evidence and drawing objective conclusions. The below listed are some of the methods used to analyze blood pattern:

- HemoSpat: This is modern software that can provide data on the exact position and the location of a victim in a crime scene, by analyzing the impact patterns. It is much more superior to the traditional methods which involve a lot of time and manpower to produce this information. In fact this software produces the results in a 3D format which can be used in accurate reconstruction of the crime scene and for future references.
- BackTrack: The Backtrack suite enables the investigator to scientifically conduct the ‘ Directional Analysis’ on the blood sample and helps him trace

the origin of the blood. The origin of the blood was traditionally calculated by the string method or the tangent method. But the traditional methods were not able to determine accurately the source or origin of bloodstains which drop downwards. On the other hand BackTrack can easily calculate the approximate location of the source of a downward moving blood splatter.

- Crime Scene Command: This is a software package aimed at helping detectives in keeping track of all evidence collected from a crime scene. Apart from calculating bullet trajectories and analyzing blood patterns, this software also keeps track of statements obtained from witnesses. The medicological version of this software also comes with an advanced ‘ time since death calculator’.

During the past century, forensic science has grown leaps and bounds. It has evolved from simply determining whether a blood sample is human or not, to testing its DNA and finding out the genetic characteristics. Detectives and scientists can today, with the help of automation, easily find blood samples and analyze them chemically, to uncover clues and solve crimes.

Citation:

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