

Artificial Intelligence: Technology Applied on Criminal Justice

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Abstract

Technology has become an essential aspect of law enforcement routine, helping police officers on solving, preventing and even predicting criminal activity globally. Artificial Intelligence is one of many important tools police can rely on. The harmonic integration between men and machine is now an essential part for operations success on security enforcement. How artificial intelligence can address criminal justice needs? Which innovations we have available to improve public safety? This article will demonstrate how artificial intelligence (AI) has become a major resource in numerous ways. It is now the ultimate solution for criminal justice, based on big data, algorithmics and machine learning to detect different patterns on human behavior. Those solutions are mainly based on pattern identification, image scanning, face recognition, sociodemographic analysis, voice parameters, actions, conducts, movements, biometrics and even emotions acknowledgement, which are now being considered an excellent evidence for deception detection, fraud, violence and terrorists acts. It is also used on DNA documentation, ballistics and profiling. Unlike humans, machines do not tire. On the opposite, it is proven on several ways, to be better than humans. It is confirmed machines are very good on identifying anomalous patterns and learning new patterns faster than humans. AI technologies provide the capacity to detect, predict and evaluate, overcoming errors and present virtuous results. The more amount of data, more precise will be the outcome. AI algorithms can potentially be used as a very efficient observer, increasing the accuracy of police officers on their complex daily routine. Predictive analysis (ex. PREDPOL) is one of many examples we will show to demonstrate how important those solutions subsist and innovate the security context. Those systems process large volumes of information simultaneously, providing precise outcomes. This article will deeply investigate and compare several platforms used by different law enforcement units around the globe, pointing new solutions, challenges and potential developments needed. As a conclusion, we have noticed how important the introduction of AI on law enforcement routine was, performing risk evaluations, crime solutions and delinquency prevention.

Biography

Selma Blum is a forensic psychologist, founder of a technology start-up in Brazil, Spain and Israel known as Incube. She also has several years of experience in technology applied on security enforcement, behavior analysis, criminal profiling, artificial intelligence and Aviation Security. She also performs external collaborations and consulting on several law enforcement units like Brazilian Civil Police, Interpol, Spanish Ministry of Interior and Guardia Civil. Selma is worldwide known as a lecturer in several congresses, security events, universities and airports.

Mrs. Blum also published several articles regarding the importance of technology for law enforcement excellence. She is also well recognized as an intelligence instructor, having been training international airports staff on different aspects of behavior science. For her, there is no security without technology anymore. The integration between agents and systems is one of the most important resources public safety can rely on to deal with criminality properly. To reach high standards of quality, it is also mandatory investments on training, infrastructure, research and knowledge exchange.