Eye of the Storm

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The purpose of this project was to expedite the process of apprehending known criminals and terrorists . There are an estimated 30 million surveillance cameras deployed in the United States capturing 40 billion hours of footage every week. This immense reservoir of digital images could can be processed to identify and locate known criminals. Computers could be used to analyze the data, but conventional algorithms cannot handle processing the large quantity of information. Furthermore, batch processing this data would can not be able to deter additional criminal activity or accurately provide law enforcement with current locations of known criminals. To solve this problem, a real-time Big Data solution was implemented to search the data for a targeted object such as a human face. Using the Storm real-time computation system paired with computer vision software, a product was created that compares real-time images to a database collection of known faces. In a controlled environment, the program was able to identify an individual with 100% accuracy against a database of 40000 forty thousand faces of the FBI’s most wanted criminals. It was concluded that implementing a real-time facial recognition system was a feasible solution to locating wanted criminals. Additionally, such a system could be deployed in specific areas of interest such as airports and schools to discourage terrorist activity.

Awards Won: