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By Rob Huberty

Identifying the Threats

Using AI to make school security smarter before the first shot

There are few events more devastating and difficult to prevent than mass shootings. When the average length of an active shooter incident is twelve and a half minutes, but the average police response time is 18 minutes, every second matters in an active shooter situation.

There is a vast network of security cameras in the world, but they are primarily used as forensic evidence. First responders walk into unimaginable situations because they don't have enough situational awareness when they arrive on scene, lacking real-time information about the number of shooters, weapons and current locations of threats.

More often than not, conflicting reports on the ground deliver inaccurate intelligence about the location and description of the shooter — misleading dispatchers and law enforcement, as well as wasting valuable time while police clear unnecessary rooms looking for threats.

K-12 schools in the United States are leveraging artificial intelligence to make their security cameras smarter and give first responders, faculty and students the best chance at preventing mass tragedy.

In 2019, Rancocas Valley Regional High School (RVRHS) in Mount Holly, N.J., installed an AI weapons detection system that integrated with their legacy security cameras, as an added layer to their safety-first protocols. Camera feeds are monitored by an algorithm that has been trained to detect guns of many types — from handguns and shotguns to the assault rifles typically used in mass shootings. As soon as a weapon is detected by the system, an alert is sent to administrators, school resource officers, police and/or 911 dispatch. Officials can see a map of the school and know exactly where the shooter or shooters are in real-time based on camera feeds.

This platform delivers the opportunity to prevent the shooting if the shooter is outside the school by locking the school doors before a shot is fired; the opportunity to move students away from the shooter toward safe zones or evacuation points. It also allows first responders to go to the shooter's exact



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location more quickly, knowing how many and what kind of weapons are present, preventing further violence from occurring as well as rendering first aid much faster if needed, saving lives.

All of these opportunities happen at first sight — not at first shot. Security cameras became the new "fire alarm" against exposed guns.

In its initial pilot of the technology, RVRHS scripted a series of active shooter drills with 60 police officers from six local townships and integrated with Burlington County 911 Dispatch. The first set of drills did not use weapons detection technology, and officers had to rely upon simulated 911 calls and role-playing to determine the location of the threat. In the second set of drills, weapons detection technology was deployed, and responding officers interacted directly with their 911 Dispatch to locate and neutralize the threat.

The results were profound. On average, the response time from first notification of an active shooter to first contact with the active shooter was reduced by 50 percent when using weapons detection technology.

911 Dispatch was able to continuously update responding officers on suspect location, physical description, weapon type and disposition when using weapons detection, which improved tactical situational awareness by responding units.

Also, 911 Dispatch was able to conduct real-time forensics with weapons detection, which ultimately resulted in identifying a shooter hiding among students.

Since then, South Pittsburg High School in Tennessee has also deployed weapons detection technology after pilots demonstrated a significant improvement in response time and situational awareness by responding units.

Active shooters continue to represent a significant threat to American schools, and we need solutions to prevent these tragedies. By augmenting current security measures with the latest in artificial intelligence, schools are adding a proactive component to curb mass shootings and ultimately give students, faculty and first responders a chance. 🙌

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