Gun-spotting camera can catch you the second you touch a gun - California considers use state-wide

by Nancy Owano, Tech Xplore

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Technology makes it possible to catch criminal theft, violence, and mass shootings as it happens, and for viewing after the fact. What about revving up the camera technology so that even responsive action can happen realtime?

Particularly, how can we create technology to lessen casualties and mayhem tied up in horrific events of mass shootings? That is a question Lisa Falcone liked to think about, and her motivation to provide answers fed into her look at the current surveillance market. Surveillance: big whoop.

Cameras basically just recording crime... but just think if they could also communicate alarms and curtail the mayhem. **Lisa** Falzone is now the Athena company CEO. Falzone created the system technology with her co-founder, Chris Ciabarra, said **Renae** Reints in *Fortune*.

The Athena Security AI-based camera system can also offer an interface with third-party systems to lock doors, freeze up

elevators, and communicate with people. Casualties in turn could be prevented, even some lives could be saved.

VentureBeat defined them as "a startup that's developing a machine learning layer for security cameras in retailers, corporations, and schools."

According to the company's official announcement, this is a launch of a security camera system capable of "instantly and accurately recognizing an active shooter before they shoot," sending out an alert to law enforcers. Athena's system is set up in one US school, Archbishop Wood High School in Warminster, Pennsylvania.

After spotting a gun, for example, it sends an alert to the business owner or authorities. It can stream live video to law enforcement too. That's not all. *Digit* said, "Users of this system have the option of hooking the camera up to other third-party security systems so that doors can be locked and lifts **halted**."

Pricing? The business model is per subscription type. The price range is $25 to $100. The system will be available in three tiers: Professional, Enterprise, and Unlimited Professional. Locklear said that the tier including gun detection, lock and elevator integration and real-time access costs $100 per camera per month.

Prices also reflect duration of service. A $50 fee wins 30 days' recording, a $25 fee wins 7 days' recording, and $100 gets the owner 1 year recordings. All carry cloud access.

Fine, but how accurate is the gun-detecting AI? *Government Technology* had an answer: 99 percent. "Since the gun **detection** is so accurate, the company is working on including

recognition of other dangerous scenarios, such as knives and fist fights," said the report.

The accuracy rate is not ignored as a talking point. "False positives can be a problem for computer vision systems," said Mallory Locklear in *Engadget*, "and that would be particularly troublesome for a security camera that has the ability to alert police **directly**."

Once Athena detects a threat, a monitoring service **service** validates the threat and only involves the police when needed, said the company site. Even if the system were not to get it right, in other words amounting to nothing more than a false alarm, the system could learn from that.

Falzone said in *VentureBeat* that notifications have a "true or false" selector, making it easy to flag mistakes, with every flag feeding back into the system, improving its accuracy.

The system technology capabilities also pick up the store worker's stress levels, according to the company site.

Meanwhile, Kyle Wiggers in *VentureBeat* dove into some technical details.

The system involves "a Nvidia 2080 RTX graphics card and computer vision to detect what Falzone calls 'dangerous **objects**'— specifically guns. (Future versions will spot knives, too.) The AI system ingests footage from off-the-shelf security cameras and looks for 'dangerous motion' at a rate of 30 frames per second, alerting school administrators (or the police) via an app when a threat's detected."