

Plano Star Courier

SECUREGUN

Teens develop smart gun to stop mass shootings

What if a gun could think for itself?

It's an unorthodox question a group of local students are attempting to answer.

Ten Plano and Frisco students – Amina Syeda, Hawwa Shahid, Salwa Shahid, Rayyan Punjani, Hanzala Rehan, Hanin Shakeel, Areeba Qazi, Faaiz Nadeen, Amaan Jaffar and Nabeeha Qazi – created SecureGun, which has the ability to lock or unlock itself depending on where it is and where it's pointed.

The SecureGun students said they first got the idea for a smart gun after the school shooting at Stoneman Douglas High School in Parkland, Florida. The shooting, where 17 students died in their classrooms, opened their eyes to the realities of gun violence.

"The kids at Parkland ... they didn't know that when they were going to school that day that something so horrible would happen, and we as high schoolers, we've all thought, 'What if this happened at our school? What would we do?'" Salwa Shahid said.

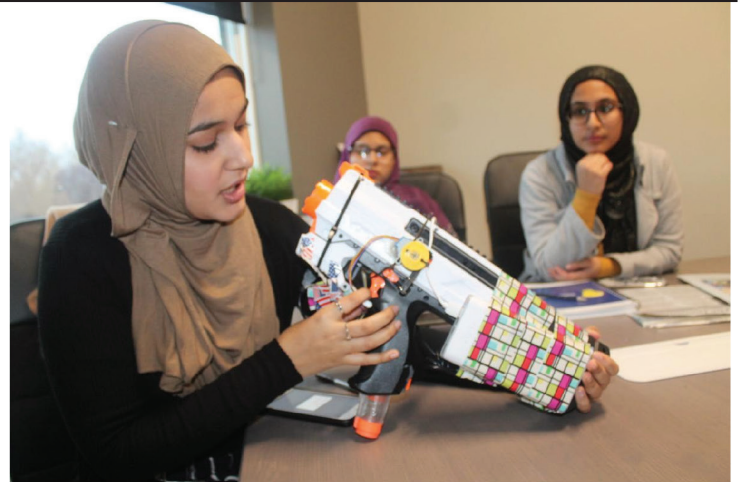
And when a spree of students were caught bringing guns to local schools, the students realized "it's a problem that can happen anywhere, and our focus is to limit that problem to its maximum ability while appeasing both sides of the argument," she said.

The SecureGun prototype is a modified toy gun equipped with GPS technology, geofencing and artificial intelligence (AI). Below the nozzle sits a high-definition camera that's connected to AI technology that allows the camera lens to decipher what it's pointed at, like a person an animal, crowd or gun range target.

The gun also comes with a GSM module, much like the GPS in most smartphones, with geofences surrounding public spaces like schools, malls, movie theaters and other public places.

"Once that gun enters that specific area, it would choose between either locking or unlocking the gun," Amina Syeda said.

Gun-safe zones, like hunting grounds or gun ranges would have no restrictions. If the camera detects a target or an animal, it can fire at will. However, in public areas or if the gun is pointed at a crowd or an unarmed person, it can only fire one bullet per 20 seconds. On average, emergency vehicles respond to disasters between 3-18 minutes, while some automatic weapons can shoot 6,000 rounds per minute and 100 rounds per second. The SecureGun technology is designed limit a shooter to three bullets per minute.



The prototype version currently takes seven seconds to determine what the camera is looking at, but in its actual version, SecureGun is designed to make decisions and unlock a gun in 500 milliseconds.

"We wanted to come up with a solution that would satisfy both gun owners and gun control advocates, and it's not a political solutions," Areeba Qazi said

"We're not taking guns away, but we're also adding a line of defense and security to it," Hanzala Rehan added.

Today, the prototype is much bulkier than the final design, but the team sees SecureGun as attachable technology in the hollow part of a gun handle or as manufactured smart guns with the technology already imbedded.

"We recognize that there's a lot of gun advocates who would be against the implementation of the SecureGun, but it's important to realize that the laws we've had so far have not done as much as they could to stop mass shootings," Shahid said. "And with our implementation, people can still buy guns. It's just going to add a layer of security so that people can still use their guns for recreation purposes but not for harming others."

The prototype is still being developed, the team said. They're working to make the gun tamper-proof, improve its intelligence and ensure it can determine two-dimensional figures from three-dimensional figures.

The team expressed optimism that SecureGun could bring both sides of the gun debate together.

Americans proved they can make adjustments in the name of national safety after the Sept. 11 attacks in New York City. Airport security increased dramatically, they said, but today, people are accustomed to those same security measures that used to seem so cumbersome. And the teens took the most recent midterm election as a sign that people can change.

"For decades and decades, we were an all-Republican state, and for this year, we were extremely close to bringing a Democrat into a Republican Senate, so people's opinions do change. And if we were able to convince enough of the population that this was a viable solution, it could definitely be done," Syeda said.

"Change and evolution are inevitable. It's just when does it happen and what climate does it happen in? This is the right climate for it to happen in," Hanzala Rehan said.

The SecureGun team recently took their invention to the Conrad Spirit of Innovation Challenge 2018 and were named finalists in the Cyber Technology & Security category. Their innovation is currently patent pending.

