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LONG ISLAND / TOWNS

Ex-Sachem High twins donate robotics equipment to NYC program



Twins Sofia left, and Stefanie Karayoff, in the robotics lab at Sachem High School, with equipment to be donated to New York City schools for their robotics competitions. Credit: Linda Rosier

By Carl MacGowan

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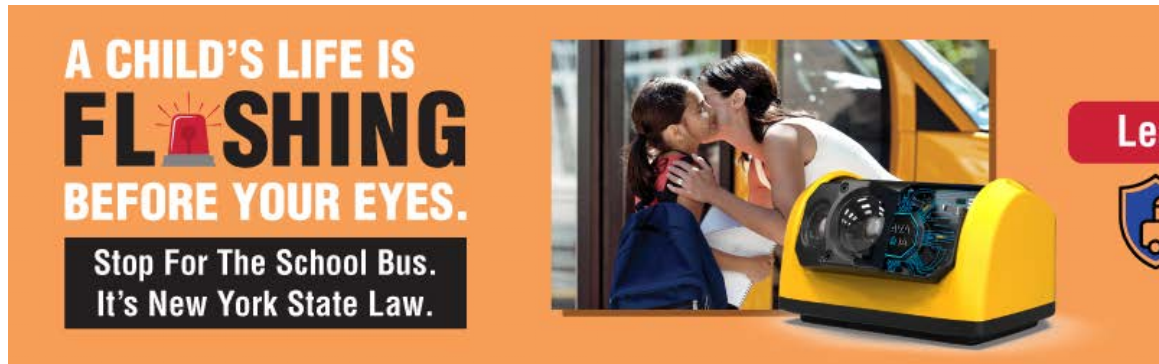
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Twin sisters Sofia and Stefanie Karayoff arrived at a robotics competition in Manhattan more than a year ago hoping that their Sachem High School North team might win a prize.

They didn't win, but what struck the sisters most was the disparity between Sachem's sophisticated tools and the outdated equipment used by some of the other teams.

The sisters and teammate Yash Jani noticed that New York City teams were using pieces of wood to make robots

that could shoot a basketball or climb monkey bars. That was in sharp contrast to the shiny metal robo-athletes built by Sachem and other Long Island squads.



Moved by a sense of fair play, the classmates started a program in January to collect robotics equipment from Long Island schools and donate them to NYC First, the city nonprofit that sponsors student robotics programs in the five boroughs.

Jani and the Karayoff sisters, who have since graduated and started college, initially used social media and email to contact potential donors. Now they are developing a website that will help needy schools pick the pieces they need, which will be shipped to NYC First's Roosevelt Island office.

"A lot of robots in the city weren't as developed as we were," Stefanie Karayoff, now 18, of Ronkonkoma, said of the spring 2022 competition in Washington Heights. "It just wasn't fair to see their robots made of wood."



Twins Sofia, left, and Stefanie Karayoff with robotics team adviser Robert Wentzel. Credit: Linda Rosier

Clubs from Smithtown, Southold, Cold Spring Harbor and several other districts have contributed parts, and more are on the way, Sachem robotics team adviser Robert Wentzel said.

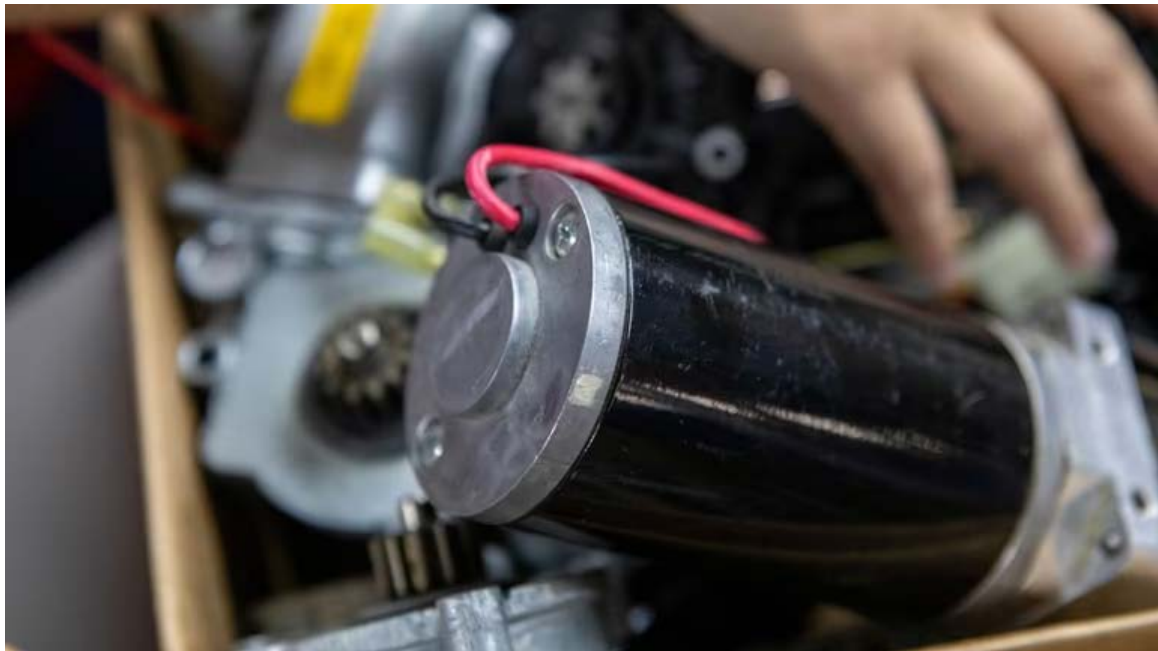
NYC First sponsors robotics and STEM — science, technology, engineering, math — programs for city students whose schools lack adequate funding or material for those programs, according to the nonprofit's website. It is part of the First network founded by Rockville Centre native Dean Kamen, inventor of the Segway.

Attempts to reach NYC First officials were unsuccessful.

Robotics teams and competitions have become increasingly popular in recent years, but wealthy schools often seem to have an advantage over clubs whose members are less affluent, the former Sachem students said.



Sachem's robotics program costs about \$80,000 to \$90,000 annually for equipment, fees and other expenses, Wentzel said. The school district pays competition fees, a booster club helps pay travel and hotel expenses, and students hold car washes to raise money, he said.



Some of the wheels and motors that have been collected by the program. Credit: Linda Rosier

"I think there were some advantages" for wealthier schools, said Jani, 18, of Lake Ronkonkoma. Now attending Florida Institute of Technology, he recalled that Sachem arrived at the Manhattan competition with their robots already built while teams from poorer communities still had work to do. "They were working on their robots during the competition," he said.

Sachem officials said their former students had seized an opportunity to make a dent, however small, in those economic disparities.

"We build a culture of care here," Superintendent Chris Pellettieri said. "They looked at this playing field and saw that this is not a level playing field and said, 'We can do something about it.'"

Sofia Karayoff, who is studying health at Stony Brook University, said the students' initial attempts to collect donated equipment didn't go well, as email messages and social media posts went unanswered. Eventually, schools began responding.

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"It makes me feel proud," she said. "Seeing it happen is kind of inspiring because I had doubted it a little bit."

Her sister, a mechanical engineering major at Suffolk County Community College's Selden campus, said she wouldn't even mind if one of the city schools eventually defeated Sachem.

"Of course it's fine," she said. "It's the journey, it's not the win."

About bots

Technology companies in recent years have developed robots that can perform ordinary — or extraordinary — tasks. Here are a few examples:

Surgery: A robot has been developed to perform minimally invasive surgeries that can't be done by a human hand.

Spot: Boston Dynamics made waves on social media with "Spot," a dog-like quadruped bot that it says can navigate challenging environments such as construction sites and natural disasters.

Automobiles: Robots are commonly used to assemble cars, performing tasks such as welding and painting.

Pizza delivery: Domino's has an experimental self-driving vehicle that uses GPS devices and sensors to deliver pizza. You want anchovies with that?

SOURCE: willrobotstakemyjob.com



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Carl MacGowan is a Long Island native who covers Brookhaven Town after having previously covered Smithtown, Suffolk County courts and numerous spot news and feature stories over his 20-plus year career at Newsday.