

# CV resident teaches programming to pre-teens

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The robot in Vic Wintriss' classroom is gyrating, and he doesn't know why.

The disc-shaped machine howls a high-pitched whirr as it rotates back and forth, fixated on a particular spot of carpet in between the wall and the left foot of Ryan, a 5th-grade student.



**Vic Wintriss**

Wintriss looks concerned. The robot's just sitting one place, whirring at the carpet.

"It's on spot-clean though," Ryan explains. "That's why."

Suddenly the robot stops moving, falls silent. Then a pleasant "bee-EEP" fills the small, sunlit classroom, putting a quizzical look on the teacher's face.

"It does that when it ends," Ryan explains.

"You told it do that?" Wintriss asks, shaking his head.

"Yeah," says Ryan, without looking up from his computer screen.

One gets the feeling from talking to Vic Wintriss that occurrences like the above please him immensely. The former Navy pilot and engineer started a small, nonprofit school in Carmel Valley that aims to teach grade- and middle-school students computer pro-

gramming, a subject most students don't encounter until at least high school.

A year into his teaching, Wintriss' belief that younger kids are fully capable of learning computer programming seems more than confirmed. Like the 10-year-olds of yore teaching parents how to set the clock on their VCRs, Wintriss' students have taken the Java language they soak up a during couple of hours per week and let loose, amazing even their teacher.

And the kids love it. "We wouldn't be here if we didn't think this was fun," Ryan shouts from behind a dazzling white, 20-inch iMac.

"When I was a kid, I was into amateur radios and fixing cars," Wintriss explains. "We didn't have computers in those days, but these were my hobbies and I was really into them. And when I got to college I knew why I had to learn these things."

Wintriss studied engineering at Cornell University, went on to be a Navy pilot, and started a few engineering firms upon retirement.

"I changed jobs and all of a sudden I decided this would be a good thing to do," Wintriss says, as if there's nothing more natural in the world than buying four \$2,000 computers, renting a cozy room in a posh office building, and teaching kids barely into double-digits how to write good code.

But, perhaps like any good engineer, he didn't act on a whim — Wintriss Technical Schools is



**Vic Wintriss with Lucas Knorr**

almost a national economic strategy, available for free to kids who want to learn and can't afford to pay.

"The U.S. is losing its competitiveness because we're just falling behind in science and technology, especially in computer programming," he says. "There's going to be a shortage of a million programmers in 10 years."

"My wife says I'm not supposed to emphasize this. But these guys are going to start off at \$100,000 a piece when they graduate from college."

The plan, he says, is to secure corporate contributions to his nonprofit organization, then

open a group of schools all over San Diego. He hopes to find a "guru" instructor who can organize instruction at the schools, and perhaps take on consulting work that he can parse out to talented students, earning them money while they learn.

For now, Wintriss Tech is nothing if not intimate. The four iMacs stand on compact mobile desks, wirelessly linked to the Internet and to the robots that students program. There's a whiteboard behind Wintriss' desk, and large sheets with common programming commands plastered on one wall, in between posters from the teacher's days of being a pilot.

There's no homework, and few tests. Wintriss teaches programming techniques and assigns his students projects — often games — that they'll enjoy working on. With a regular core of only 15 students who attend weekly, individual instruction is nearly constant. He'll teach whenever it's convenient for his students to learn, and often gives them a ride to class. He even supplies juice and cookies.

"It's got to be fun for kids," he says. "They're having fun but they're also learning."

The fun comes in writing and customizing games: tic-tac-toe, a variation of the classic Pong, and a bear-and-hunter game. He recently saw a contest that asked participants to guess the number of corks in a large barrel, and he had his students write a program to figure it out. One of them came close enough to place.

But the wirelessly-controlled robots — devices from the I-Robot company, makers of the Roomba intelligent vacuum cleaner — take the action to a whole new level of almost infinite possibility, one that seems to put even Wintriss in awe.

"Only 25 percent of the high schools require computer science. I know of no grade schools or middle schools that are teaching computer programming. But I figured hey, these kids can learn," Wintriss says. "You can do some pretty magical things."