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High School Students Complete Robotics Workshop at Grambling State University



Local high school students completed a two-week workshop on robotics and cyber security at Grambling State University on June 18. Shown from left to right are Mercedes Swift, a junior at Grambling High School; Jhori Leonard, a senior at Jonesboro-Hodge High School; Prof. Yemumula Reddy; JhaVinie Barnes, a junior at Waxahachie Global High School; Melanie Colvin, an English teacher at Grambling High School; Daizsha Hackney, a student at Grambling Middle School; Rhonda Lee, an assistant principal in Jackson Parish; Nicholas Douzart, a junior at Grambling High School; Kiran Seetala, a student at Ruston High School; and Evelyn Todd, a student at West Monroe High School. Photo by Glen Lewis.

GRAMBLING, LA – Nine high school students completed the Summer 2015 Workshop on Robotic and Cyber Security at Grambling State University on June 18.

The students include Mercedes Swift, a junior at Grambling High School; Jhori Leonard, a senior at Jonesboro-Hodge High School; JhaVinie Barnes, a junior at Waxahachie Global High School; Daizsha Hackney, a student at Grambling Middle School; Nicholas Douzart, a junior at Grambling High School; Kiran Seetala, a student at Ruston High School; Chris Burks, a student at Caddo Magnet High School; Aeneas Bell, a senior at Jonesboro-Hodge High School; and Evelyn Todd, a student at West Monroe High School.

The workshop, which began in 2006 and is sponsored by the Air Force Research Laboratory Collaboration Program, is a two-week summer program for high school students and teachers to learn how to build and program robots with the goal of preparing the participants to compete in robotics competitions.

“These students have complete training for programming and everything,” said Yenumula Reddy, a professor of computer science who runs the robotics workshop. “They can easily go for a competition, but teachers have to take the next step. Teachers learn and then become instructors for the students to take them into competition.”

Melanie Colvin, an English teacher at Grambling High School who has been working with the program for five years, said this camp exposes her students to valuable lessons in computer science, engineering and computer programming that they would not normally receive in high school.

“It actually exposes them to things that they probably wouldn’t get in the high school classrooms. A senior I had this year, he worked with the program last year and his major is going to be computer programming because he was exposed to this program,” Colvin said.

During the first week, students build robots and program them to complete various functions, such as moving objects and climbing up stairs.

In the second week, the addition of various sensors add a wide range of capabilities to the robots’ functionality. The use of an ultrasonic range finder sensor allows robots to avoid obstacles in its path. The sensor emits a sound wave, which bounces off a reflective surface and then returns to the sensor, allowing the robot to determine the distance from the object and when it needs to turn in order to avoid the object in its path. Other sensors allow the robots to track lines and detect light, adding multiple ways to control the way the robots move.

JhaVinie Barnes, a junior at Waxahachie Global High School, joined the program after her cousin participated.

“This is my third year doing it. Originally, my cousin did it, and I said that’s cool, building robots and stuff,” Barnes said. “I like all the experience and skills it gives you. You learn as you go. There are people who help you if you need help, but it’s more like if there is a problem, you figure out how to solve it.”