Learning to code with droids
SSCC class uses 'Star Wars' character for education

Nearly 30 students and STEM educators flocked to Southern State Community College in Hillsboro July 25-26 to learn coding and electronics with R2-D2, the beloved droid character from the "Star Wars" franchise.

Computer Science Professor Dr. Josh Montgomery developed the class to teach 6-12 graders and their educators how to apply electronics and coding knowledge to 20 "mini domes" resembling the droid.

With the help of Montgomery and SSCC Computer Science students Alex Bradshaw, Blaine Parker, Elijah Siders and Todd Guden, participants learned how to make the domes light up, move, chirp and beep just like the droid in the sci-fi film series.

Montgomery, an avid "Star Wars" fan, brought along a full-scale replica of R2-D2 which he built several years ago.

"Everyone enjoyed the experience a lot," Montgomery said. "Any time you do coding or electronics, you have frustrations, but with instruction, the students were able to understand what they were doing and everyone completed the course."

Montgomery said the class represents the idea at the core of his instruction in SSCC's Computer Science program: using project-based learning to apply technical education to real-world skill.

"These are the kinds of skills I teach in my program," he said. "The critical thinking skills are in everything we do. You may not always be building robots in my classes, but we are always doing project-based learning with real-world stuff… Sometimes it looks like rocket science, but everyone can do it. It just takes the willingness to jump, the willingness to try."

Montgomery said he was asked in May 2021 to build a coding class for DroidBuilders, a group that builds and supports building animatronic droids from the "Star Wars" movie series. So, Montgomery and his computer science students built 20 miniature domes styled after R2-D2 and designed coursework to help students bring the domes to life.

At the end of May, Montgomery, along with Bradshaw, Parker and Siders, used the mechanical domes to teach two coding classes at Star Wars Celebration — Anaheim 2022 in Anaheim, Calif.

Bradshaw described the experience as a "once in a lifetime opportunity."

"Being surrounded by individuals who are passionate about creating and building inspired me to continue my education," he said. "Volunteering my time to teach others was one of the most fulfilling experiences of my life."

Parker said the event "allowed me to see a real-life scenario for my studies."

"Not only did I get to see what I have been learning about come to life, but I also got to help teach other students about these skills," he said. "During this trip, I realized that you don't have to go to a large school to do awesome things. Southern State has provided me with a life-changing event that I never dreamed would happen."

Parker also said the experience showed him that "anyone can participate in and excel in whatever they put their minds to if they have the right teachers."

SSCC Vice President of Academic Affairs Dr. Erika Goodwin said she was pleased with the results of the event.

"I was quite impressed when I visited the computer science lab and witnessed the students and local high school teachers diligently working on their 'mini domes'" she said. "Dr. Montgomery and SSCC computer science students provided a knowledgeable and enjoyable workshop for our local high school students and teachers. I am proud that SSCC can provide these opportunities and fulfill its mission for accessible, high quality education and community engagement."

Fall semester at SSCC begins August 22. For more information, visit www.sscc.edu, or call 937-393-3431.