



A team of Rutgers students celebrate with local youth, their families, and representatives from the Apple Community Education team at the 4-H Computer Science Pathways showcase.

Rutgers Newark students participated in a two-semester-long work program, where they led 4-H Computer Science (CS) clubs, 4-H Clovers CODE (Creating Opportunities Designed for Everyone), for local middle school age youth. Rutgers students were trained on positive youth development by faculty of the Department of 4-H Youth Development, a department within Rutgers Cooperative Extension. Rutgers students also participated in training led by a Apple's Community Education Initiative team (CEI) focused on Everyone Can Code, Challenge Based Learning, and app design. They led youth clubs, and challenged participants to create apps that could help address their community's needs including homelessness, pollution, and youth mental health. As a cumulative event to the CS clubs, youth presented their apps at a showcase at the Paul Robeson Campus Center, which included a six-person panel of Rutgers students and career professionals sharing their CS pathways story.

Manuel Sosa-Garcia, a first generation Rutgers student, part of the Honors Living Learning Program and Urban Education program, said, "As a Rutgers University student interested in becoming an educator, the program allowed me to formulate another outlook on the educational field—committing to children's enrichment and social mobility. An outlook that I will take with me when I become a teacher who will foster an environment that cultivates the talents and creativity of students."

Rutgers 4-H highschool-age STEM Ambassadors worked alongside the college students to help lead the younger youth through their app design challenges and other hand-on CS activities. Program coordinator Victoria Bruno, a Rutgers graduate student (MPA, 2022), grew through the 4-H program as a STEM Ambassador herself when she was in 9th grade. "Putting young people in the position to solve problems as a team drives our STEM programs

forward and creates great impact. This program helps us to see the benefits of bringing students to a college campus, showing them applications of STEM, and connecting them to their communities.” said Victoria. “There was great enthusiasm from both youth and their parents to come to the CS clubs, we had a full house for every meeting.”

The 4-H Clovers CODE program is supported by a gift from Apple. As part of the Apple Community Education Initiative, Apple provided Rutgers Extension 4-H with hardware, and professional learning and support, and additional support for a staff member and Rutgers students to focus on STEM programs using Apple curriculum. This creativity curriculum provides hands-on learning in the areas of coding, photography, video, drawing and music.

Marycarmen, Passaic County 4-H Agent and collaborator on this project believes ”With the rapid changes in technology and the anticipated growth in the computer science field it’s important to expose our youth to the computer science field. Providing quality youth programming to those who are interested will better prepare our youth for a future in many STEM fields. During these programs youth are also improving life skills such as critical thinking, problem solving, working in teams, among others.”

In partnership with Apple’s Community Education Initiative, the Department of 4-H Youth Development at Rutgers will continue to offer CS programming as a STEM pathway for local youth. This program highlights the opportunities for Rutgers as our land grant University to better engage community partnerships with Rutgers students, faculty and community youth. Rutgers Extension is seeking additional community partners (after school programs, in-school programs, libraries, etc.) interested in collaborating, offering CS programs for middle school youth in Essex and Passaic Counties. To learn more about how to partner or how youth may join the program, visit <https://essex.njaes.rutgers.edu/4h/educators/> and <https://passaic.njaes.rutgers.edu/4h/>.





