



Lego Robotics Service Learning: University Park Elementary School

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College Park Scholars – Science & Global Change Program

Chemical Engineering

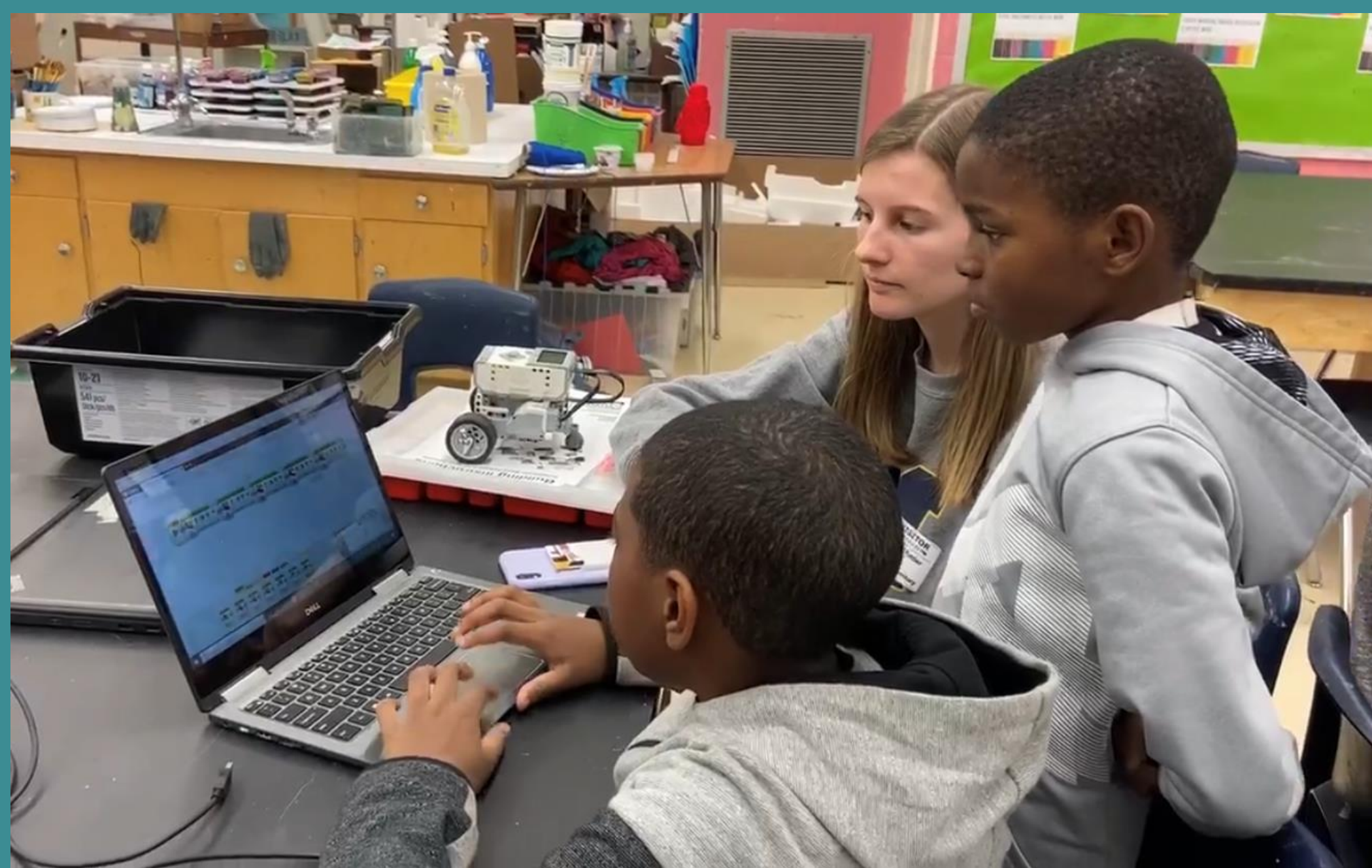
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Introduction

For my practicum project I took the class CPSS240 which was a service learning project where we taught robotics to elementary school students in Prince George's County. We were unable to finish the robots project at the school but I was able to switch my service learning to tutoring students in math via Zoom.



Two of my students and I troubleshooting the code for one of the mini challenges.

Site Information:

Name of Site: University Park Elementary School

Address: 4315 Underwood St, University Park, MD 20782

Your supervisor: Timothy Reedy

The site mission: Teach elementary school students Lego robotics through service learning.

Issues Confronting Site:

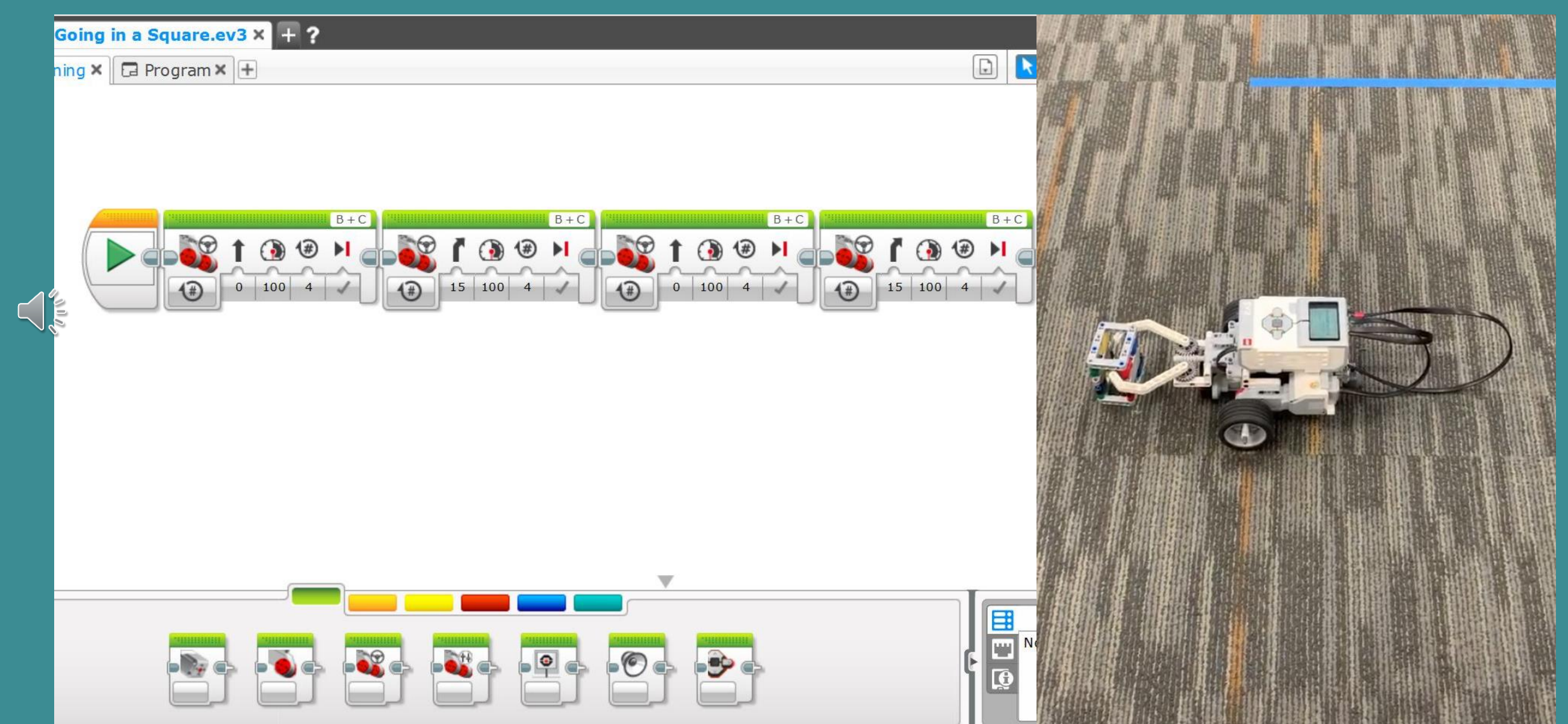
For the most part our students were well behaved but we did occasionally have to remind them to listen to us. One issue we had was that students were absent often from the club and we had learned from our research of the elementary school that 80% of students are chronically absent. There were also no available laptops at the school so we improvised and used our own personal laptops.

Activities:

The end goal of the project was to have the different groups of students compete in the Grand Challenge. We had four mini challenges planned to build up to the Grand Challenge. Each week we had a lesson plan that we would follow with our students. The students learned how to build the robot, what each of the sensors on the robot could do, and how to program it using Lego Mindstorm software.

Impact:

Even though our time was limited with the students, I still believe we made a positive impact. Some of the students had done the robotics club the year before and were able to learn quickly. We were able to give these students an opportunity they would not have had otherwise because of the lack of funding for PG County schools.



(Left) A screenshot of part of the code my students came up with for one of our mini challenges, moving in a square. (Right) The sample robot I made during our Lego robotics training day.

Future Work:

I really enjoyed the time I had teaching Lego Robotics. In the future I want to look for more opportunities to help children get interested in STEM. From CPSS240, I learned a lot about the inequalities in the education system between people of different races, genders and economic backgrounds. I want to do what I can to help reduce this gap.

Acknowledgments:

I would like to thank Timothy Reedy for being my teacher and supervisor. He gave us a lot of advice as well as freedom with how we wanted to teach our students. I would also like to thank Dr. Holtz and Dr. Merck for all the time and support they have given me over the past two years in scholars. Finally, I would like to thank Science & Global Change and the College Park Scholars as a whole for the wonderful opportunities they have provided to me.

