



Rolling Terrace Robotics

Rahul Reddy Pinninti

College Park Scholars – Science & Global Change Program
Aerospace Engineering
rpinnint@umd.edu
CPSS240



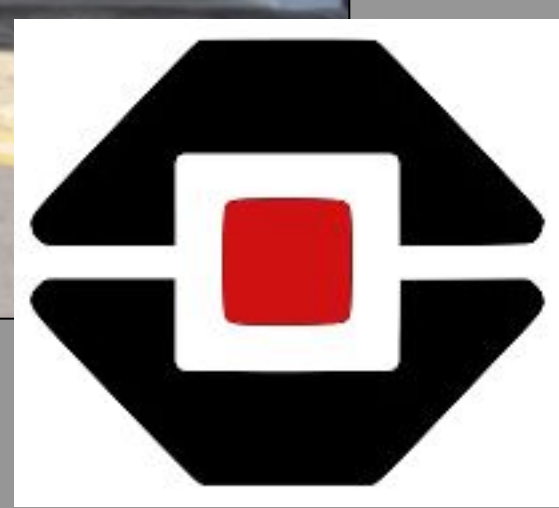
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(Introduction)

Starting in 2024 Spring Semester, I became an after school robotics teacher at Rolling Terrace Elementary School. Guiding my students through their robotics journey leading to a grand challenge at the end, I learned many engineering problem solving skills. I led my students to program and engineer a robot to finish an obstacle course at the end of the semester!

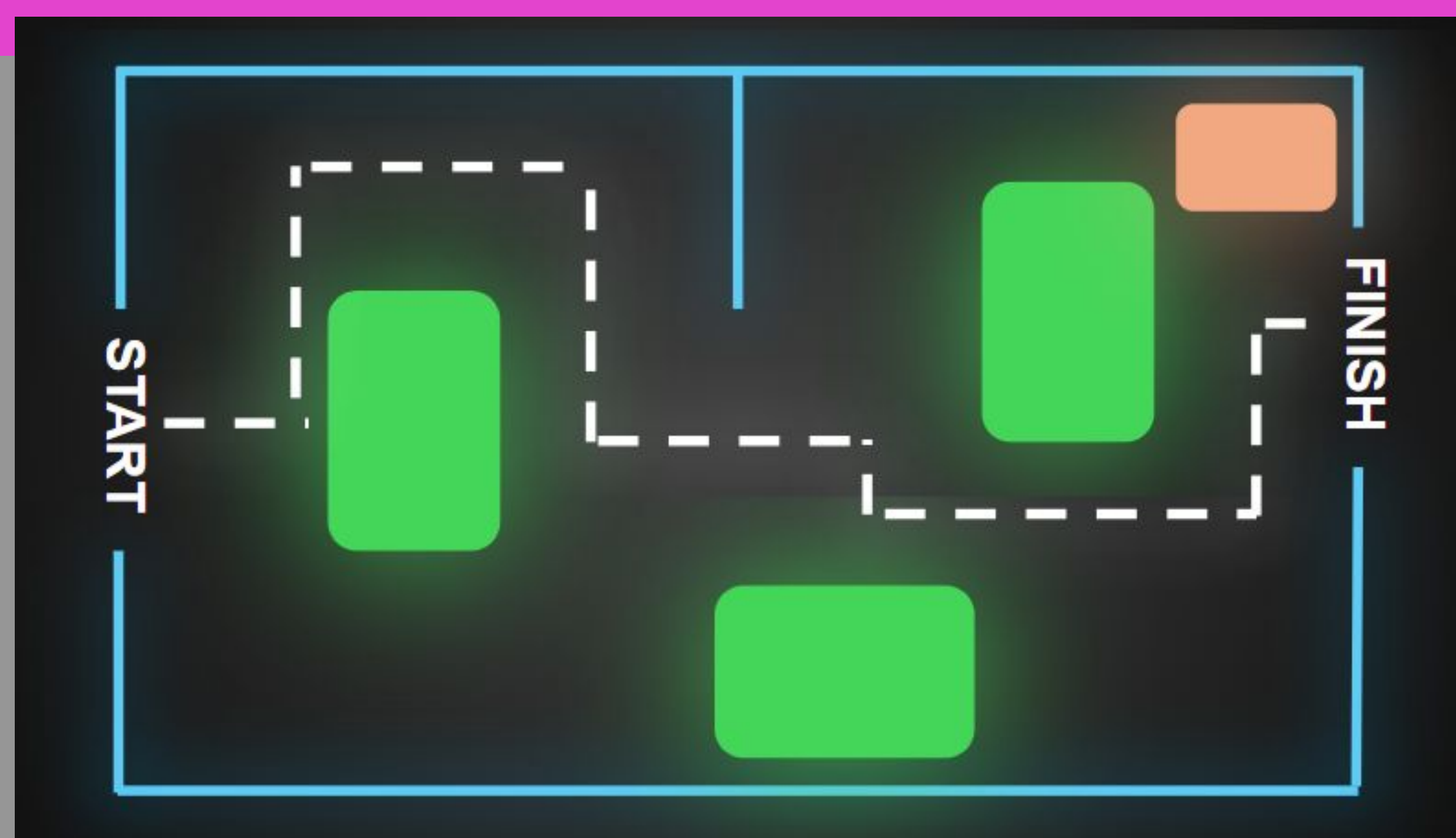


Outside Rolling Terrace Elementary School. The logo is the EV3 NXT Lego Mindstorm Robot symbol, which is robot kit + programming that we used for the Grand Challenge



(Activities)

Each Thursday, for six weeks from 3:30 - 4:50, me and group of other college students would teach the kids about the essence of EV3, robot building and programming. Additionally, the kids worked together to help plan their obstacle course which we then compiled together to make the grand challenge. The next 4 weeks, the kids used what they had learned to navigate through the grand challenge with their own programming and building. The main goal here being the development of problem solving skills and "out of the box" thinking. At the end of program, they ran their robots and programs through the grand challenge obstacle course in front of an audience.



This is a screenshot of the Grand Challenge that me, the kids and my fellow College Students worked on together

(Site Information)

Name of Site: Rolling Terrace Elementary School

Your supervisor: Professor Kuan-Hung Lo

The mission: Mission to work with a group of students to enrich their problem solving skills and academic endeavors. Personally aimed to equip the students with a STEM mindset to solving problems and introducing them to STEM subjects.

Issues Confronting Site:

Rolling Terrace Elementary School ranks in on an average of 14%, 15% and 8% on test score averages in math, english and science on the MCAP.

These percentages signal a need for a boost in STEM guidance at the Rolling Terrace Elementary School

(Impact and Future Work):

This program has provided me countless opportunities of applying my STEM knowledge into problem solving opportunities every week. STEM is not only a classification of subjects, rather it is a mindset that allows for problem solving in scenarios where we require out of the box thinking. Working with the kids every week has shown me the impact that me and my group have made as they are able to solve the grand challenge on their own through critical thinking.

I learned several outside of the box engineering and programming strategies that not only helped the kids, but also helped me in the way I approach problems. Being pushed to meet a deadline of getting the kids to finish a grand challenge helped me to constantly keep thinking of ways to pass down this STEM mindset and knowledge to them. I was assured of the career path that I had picked!

(Acknowledgments):

I would like to thank the Rolling Terrace Elementary School Staff, Professor Kuan-Hung Lo for providing me with the skills and resources to reach the kids. I would also like to thank Dr.Holtz and Dr.Merck for showing me the endless possibilities of STEM!



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