



Teaching Robotics at College Park Academy



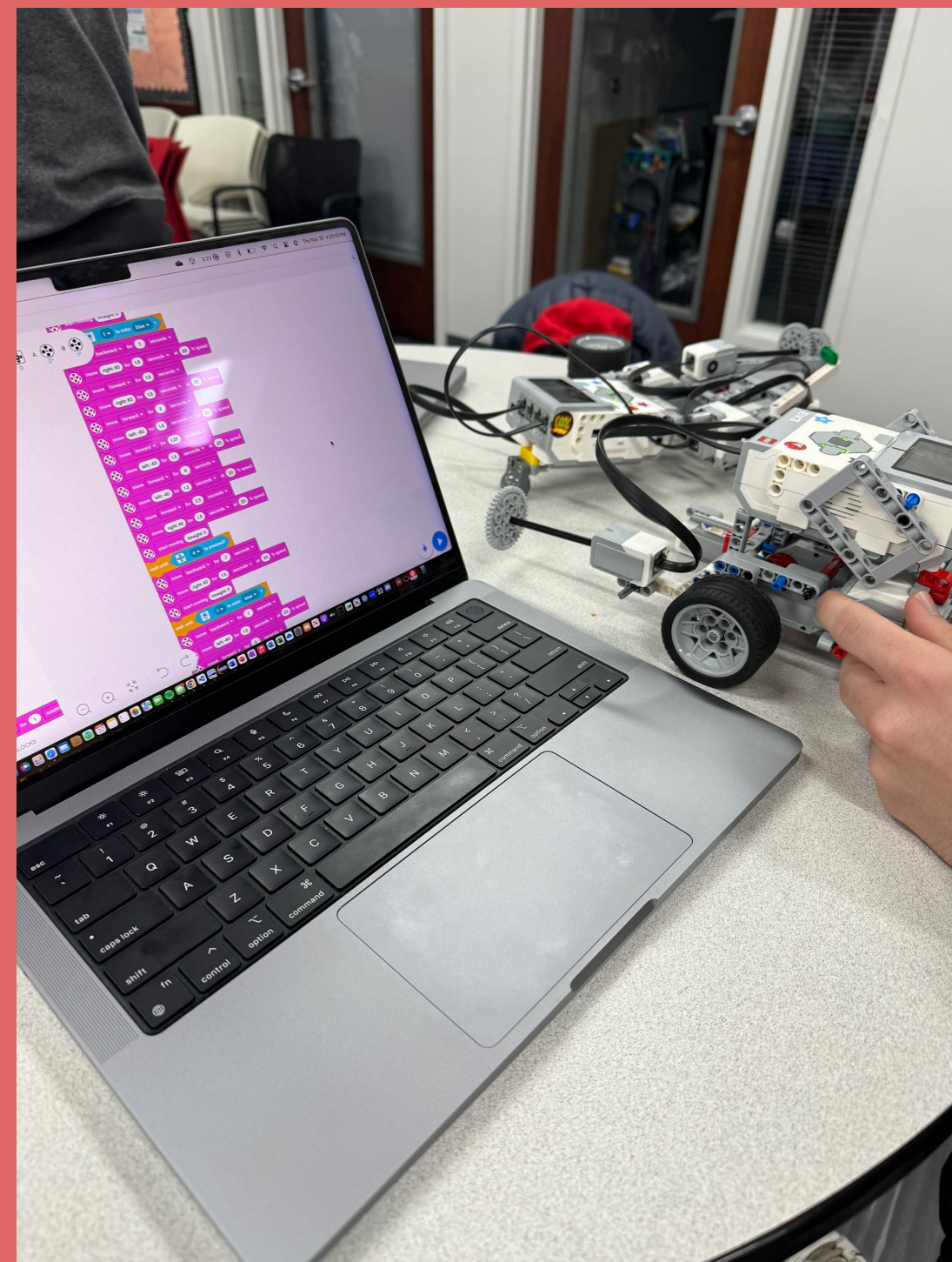
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Introduction

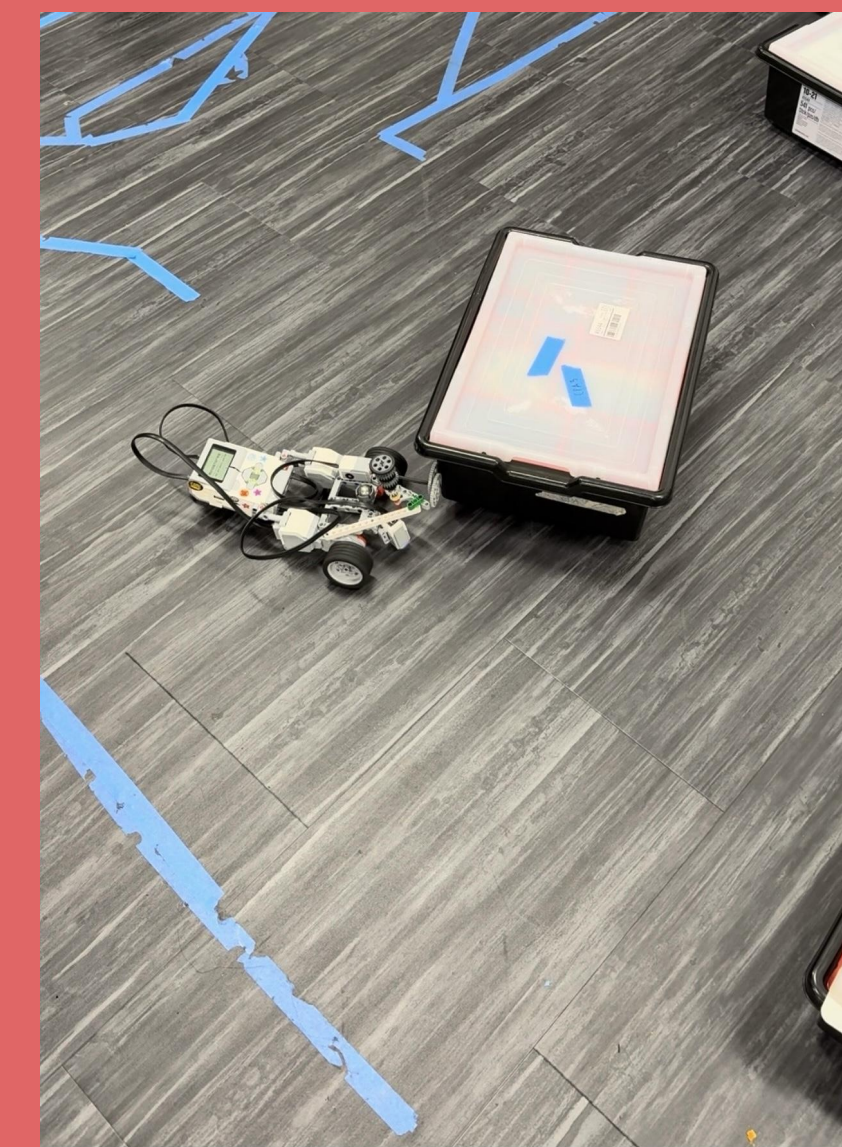
Today, STEM education is becoming increasingly relevant. As such, providing students with an up-to-date education is vital for preparing them for the future.



An example of code students from the robotics program produced over the course of the club.

Impact:

- each student was able to complete a Grand Challenge maze at the end of the program
- several students continued attending the club in subsequent semesters, showing continued interest



Left: a UMD student guides a CPA student through the Grand Challenge. (Source: self)
Middle image: A robot gets stuck on an obstacle during the Grand Challenge (Source: self)
Right image: A close-up of the Lego EV3 bricks used in the robots.

Site Information:

College Park Academy

5751 Rivertech Ct, Riverdale, MD 20737

Charter school teaching students from grades 7-12

Our mission was to teach middle schoolers to build and program robots using the Lego EV3 Mindstorms software.

Issues Confronting Site:

We volunteered to teach a robotics club at College Park Academy. The club comprised students with a variety of skill levels and we had to figure out how to make the club fun for all of them.

Activities:

- Tuesdays: developed lesson plans with other UMD students
- Thursdays: taught CPA students in-person
- used a student-centric approach prioritizing student interest over fixed curricula

Future Work:

I became one of the TAs for CPSS240 during the Spring 2024 semester and guided the next semesters' students through the process of developing lessons and bonding with students.

I participated in weekly TA meetings and oversaw improvements to the course to make it more enjoyable to students. For example, this semester students are taught in groups and have the ability to work together on larger projects. I also gave advice to volunteers about how to motivate and challenge students.

All in all, my service at CPA has contributed to increased student interest in learning robotics and getting involved in STEM subjects. I am immensely proud of the work I and my fellow teammates have done.

Acknowledgments:

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