LEGO Robotics at University Park

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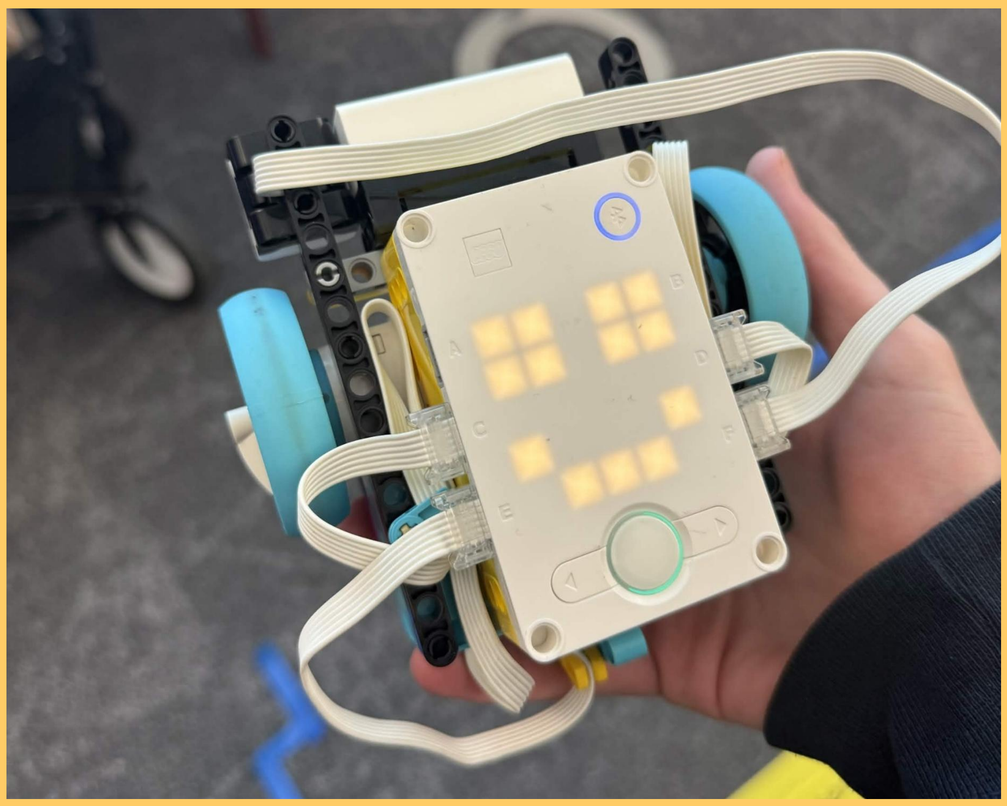
CPSS240
College Park Scholars Academic Showcase, May 1, 2026

Introduction

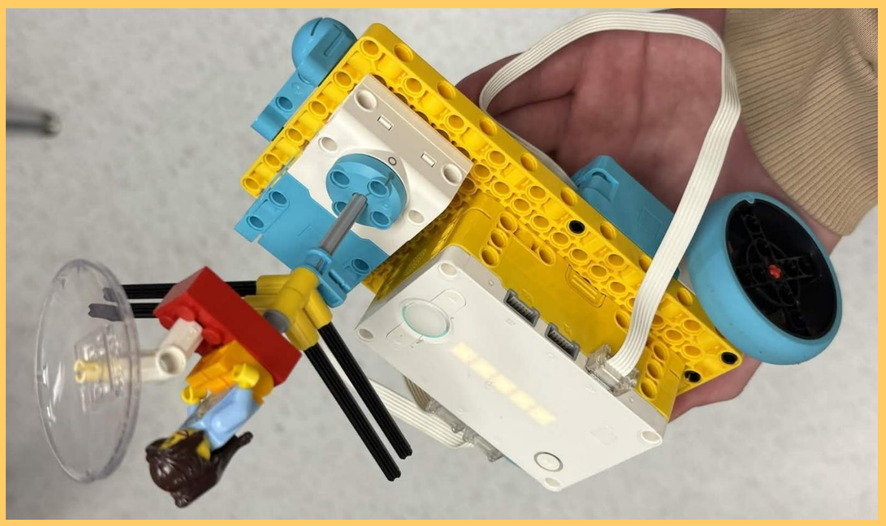
CPSS240 is a service-learning based course where half of the course is regular lecture on technology and education, and the other half is spent at a site teaching robotics.



A robot built by the students, programmed to smile.

Activities:

Each week, me and four other students in CPSS240 travel to University Park Elementary School to teach the kids robotics. We use LEGO Spike Prime kits and the LEGO Education software to give the kids a strong sense of robotics principles. In the early weeks we taught them how to use the coding software and the different sensors/motors. After the kids knew how to use the kits we tasked them with completing a "Grand Challenge." This challenge was to make a robot that can complete a maze made of colored tape that the kids have never seen before.



A robot built by the students with a rotating "weapon."

Issue Confronting Site:

University Park Elementary School has almost no STEM programs outside of this robotics program. This means that kids interested in coding and robotics have no way of exploring those fields. Many other kids who simply haven't considered STEM fields also have no way of finding out about them.

Impact:

This program allows students to get hands on experience with robotics and computer science that they would otherwise have no opportunity to. They learn the basic principles that apply to all future endeavors in STEM, and they can get exited about what you can do in STEM.

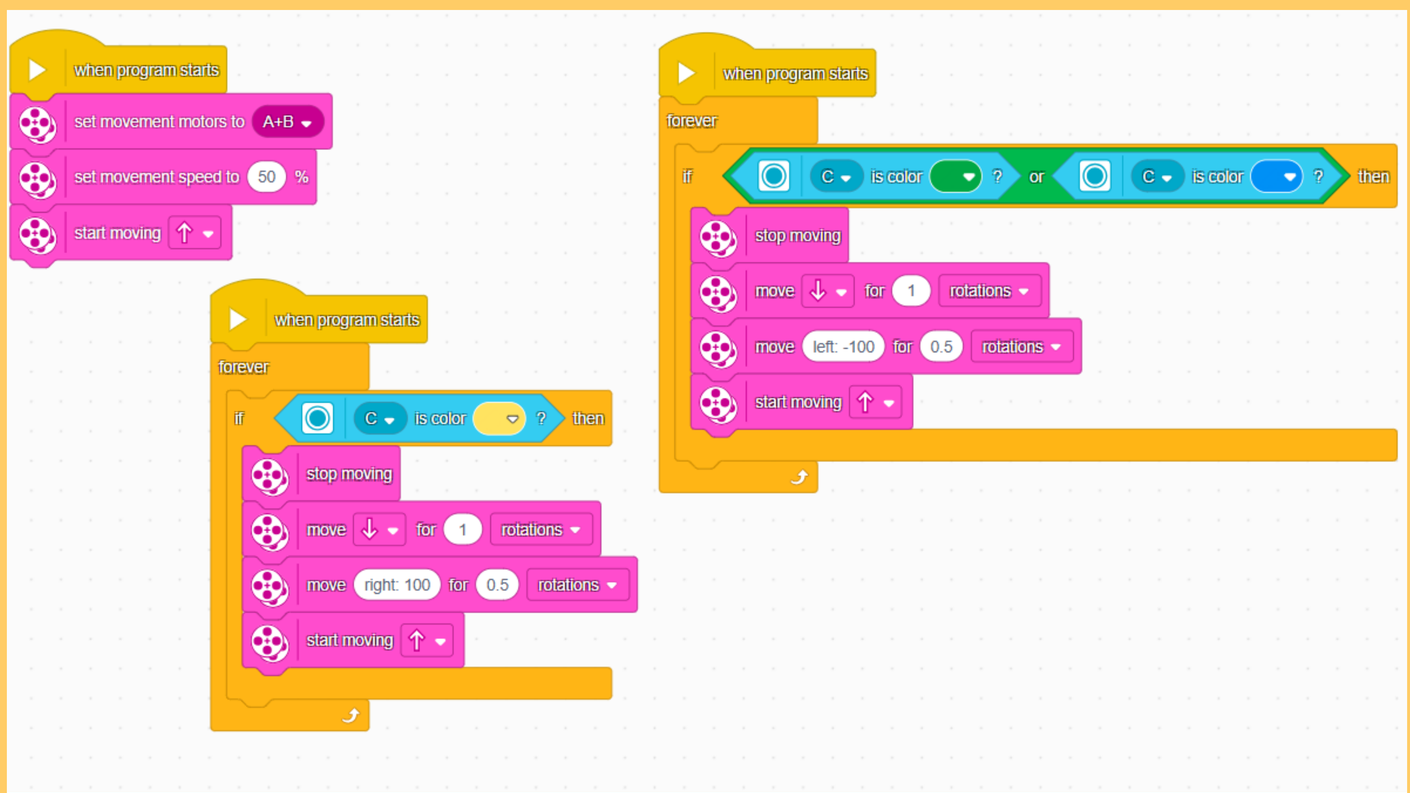
Site Information:

University Park Elementary School

4315 Underwood St, University Park, MD 20782

Supervisor: Timothy Reedy

Site mission: "Our mission is to provide a SUPERIOR educational community that empowers all students and staff to thrive."



Block code used in LEGO Education.

Acknowledgments:

Dr. Holtz, Dr. Merck, Timothy Reedy, Belema Olungwe, Ari Degliuomini, Paola Jackson, Rodolfo Medina, Emma Loshin