Building Tomorrow's Engineers

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Introduction

Taking CPSS240 at UMD provided an opportunity for me to teach robotics to students at College Park Academy, a local charter school. Although I was there to teach them, the kids gave me an education of my own. Including an understanding of current lower-level STEM education, motivations of young students, and perhaps most importantly, how to convey my knowledge to the younger generation.

Site Information:

College Park Academy

5751 Rivertech Ct, Riverdale Park, MD 20737

Supervisor: Timothy Reedy

Site Mission: To provide students interested in STEM with an informative and creative introduction to the robotic design process

Goals: To construct a jousting robot to compete in a final competition, to program sensors to perform situational decision making

Issues Confronting Site:

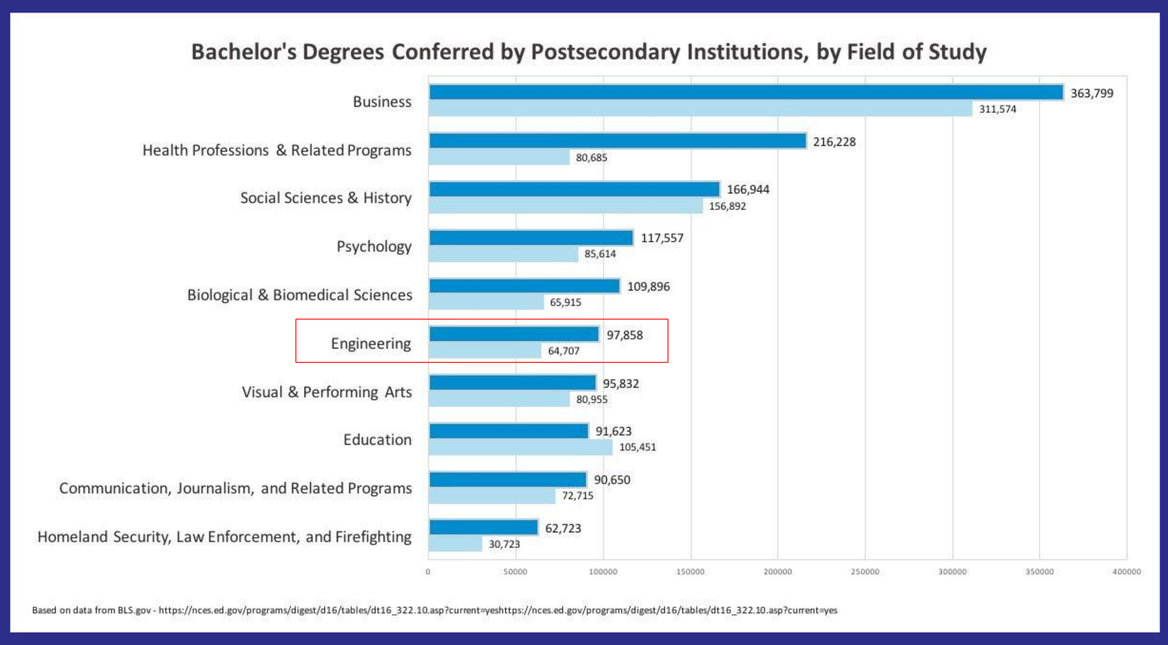
After school, the students at College Park Academy have limited access to educational extra-curriculars. CPSS240 hopes to alleviate this issue by providing a fun and technical extra-curricular program to the students. We also wanted to demonstrate and promote the STEM field to these young minds.

Activities:

One of our main goals was to convey the engineering design process to the students. So after a few days of tutorials, we had them brainstorm ideas on how to build the best jousting robot. We then had them design, build and test their creations throughout the rest of the course. We ended with a huge competition and a rewarding ceremony.

Impact:

Having this service available to the students at College Park Academy promotes and encourages an education in the STEM field. The kids in my group told me that this activity makes them want to build robots when they grow up.



Discussion and Future Work:

As the representation of students pursuing STEM education remains to be a minority, the continuation of programs such as CPSS240 can continue to have an important role in exposing young students to an education in STEM.

Acknowledgments:

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