

Going Further

GWU Pre-College Summer
Robotics

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On two occasions I have been asked, 'Pray, Mr. Babbage, if you put into the machine wrong figures, will the right answers come out?' I am not able rightly to apprehend the kind of confusion of ideas that could provoke such a question.

- Charles Babbage, 1864

Overview

- Famous computer scientists?
- Favorite robot?
- Problems controlling and programming robots?
- What is CS? Robotics?

My Goal

- Turn everyone into a computer scientist
- Failing that, give you an appreciation for CS
- Prepare you for further study (academic or otherwise)

Next Steps - CS

- Take computer science courses!
 - High school often limited
 - Many colleges count as math credit
- Self-taught
 - Thousands of tutorials online
 - MIT OpenCourseWare: <http://ocw.mit.edu/>
- Get involved
 - Open source projects
 - Robot competitions

Competitions?

- FIRST robotics competitions:
<http://www.usfirst.org/>
- Programming competitions as well
- Project Euler: <http://projecteuler.net/>

Next Steps - Robotics

- Mindstorms ~\$280
- Arduino kits ~\$100 and up
 - More technical know-how needed
- Computer simulations – Free
 - Stage: <http://playerstage.sourceforge.net/>
 - Netlogo: <http://ccl.northwestern.edu/netlogo/>

Resources

- Me: jcmarsh@gwmail.gwu.edu
 - <http://home.gwu.edu/~jcmarsh/summer>
- Gabe: gparmer@gwu.edu
- Of course, the internet:
 - www.hackaday.com
 - www.makezine.com/blog