

**K-12 OUTREACH
COMPUTER SCIENCE**

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WHAT IS OUTREACH?

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Organized effort to influence the conversation about computer science education
- Opportunity to engage in teacher development and support
- Focus on inspiring K-12 students to develop their interest in computing, problem solving, and technology
- Ability to expand the potential recruiting base for Purdue University

MAJOR CHALLENGES

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE



- Improving the understanding of what computer science is
- Finding the right context for computer science in K-12 curriculum
- Defeating the stereotypes that negatively affect the perception of computer scientists
- Developing opportunities for meaningful interventions

INDIANA K-12 POPULATION

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

	2013	2014
Indiana's K-12 enrollment	1,041,311	1,046,026
Indiana AP CS A exams / total AP exams	391/42230 (0.93%)	507/44390 (1.14%)
Purdue CS enrollees / total enrollees	282/7117 (3.9%)	311/6808 (4.6%)
Purdue CS undergraduates / total undergraduates	821/29440 (2.8%)	948/29255 (3.2%)

ADVENTURES IN CS CAMP 2015

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Two camps
- 64 total students
- Middle School – Intro to CS
- High School – Big Data
- Student tuition covers about 60% the operating cost
- Support this year from State Farm, Boeing and Ms. Vicki Capadona



PURDUE COLLEGE OF SCIENCE

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

	Male	Female	% Female
College of Science Total	2243	1116	33.2%
Computer Science	833	94	10.1%
Physics	155	24	13.4%
Math	197	78	28.4%
Chemistry	119	56	32%
Earth, Atmospheric, Planetary Science	51	33	39.3%
Statistics (w/ actuarial science)	175	116	39.9%
Biology	155	252	61.9%

Note that not all College of Science students are included above

MAGIC MENTORING

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE



- Purdue students mentor high school women in after-school clubs
- Four participating high schools
- Corporate field trips
- State Farm, Luther Consulting, Boeing sponsoring clubs
- Out-of-box program for all universities to employ



MENTORS FOR ASPIRING GIRLS IN COMPUTING

PURDUE
UNIVERSITY

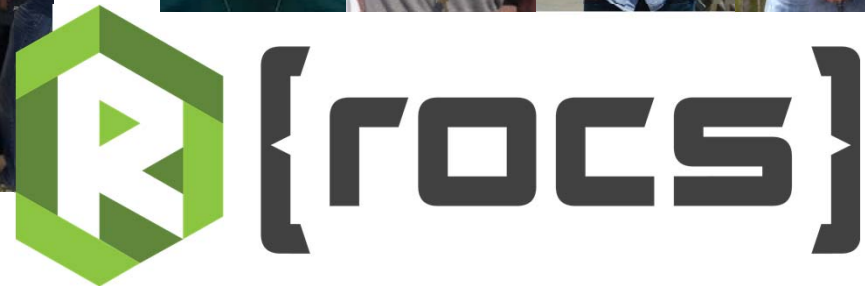
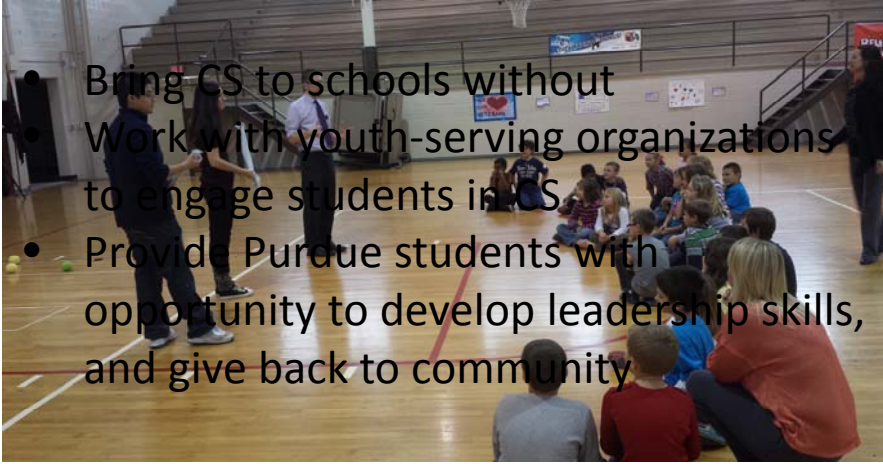


<https://www.facebook.com/PurdueMAGIC>

REACH OUT FOR COMPUTER SCIENCE

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Bring CS to schools without
- Work with youth-serving organizations to engage students in CS
- Provide Purdue students with opportunity to develop leadership skills, and give back to community



CS TEACHER WORKSHOPS

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE



- IBEA Conference CS Track
- Provide for visiting instructors
- Travel costs for teachers
- Support for CSTA which in turn supports Indiana's CS teacher population



INDIANA HOOSIER HEARTLAND

PURDUE
UNIVERSITY

LAST REQUEST...

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE



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QUESTIONS?

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

