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K-12 OUTREACH COMPUTER SCIENCE

PHIL SANDS

K-12 OUTREACH COORDINATOR

September 15th, 2015

WHAT IS OUTREACH?

- 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

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MAJOR CHALLENGES

- 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
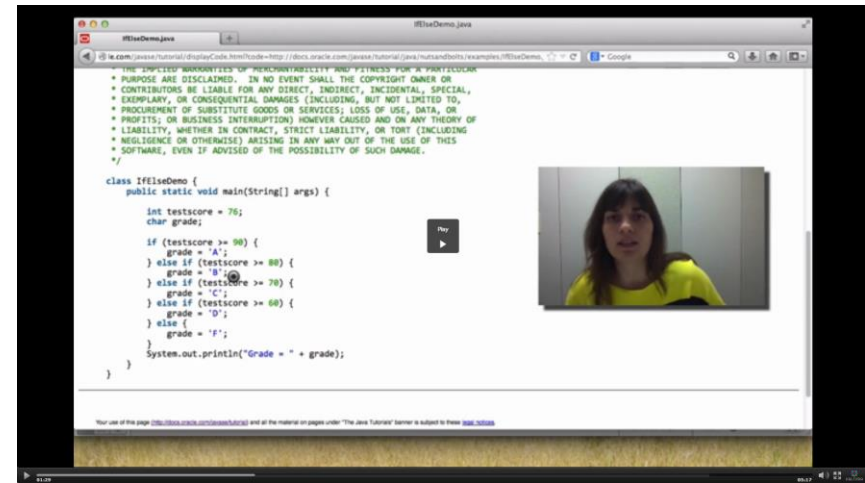
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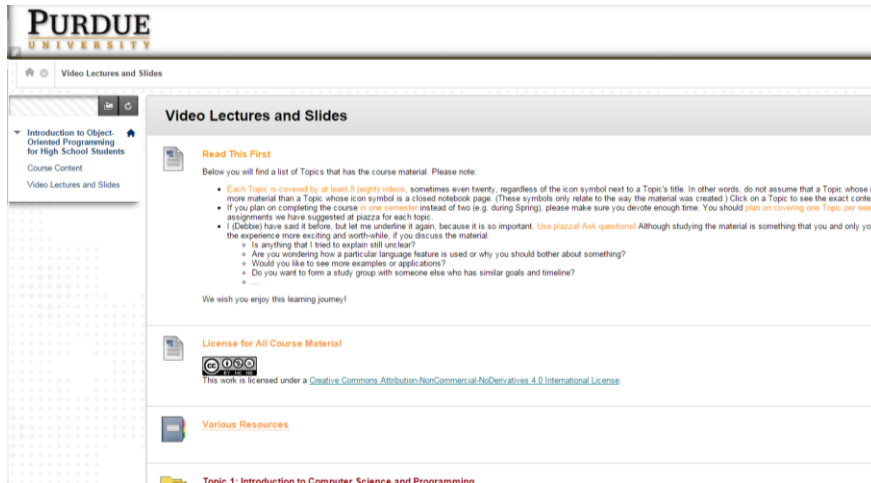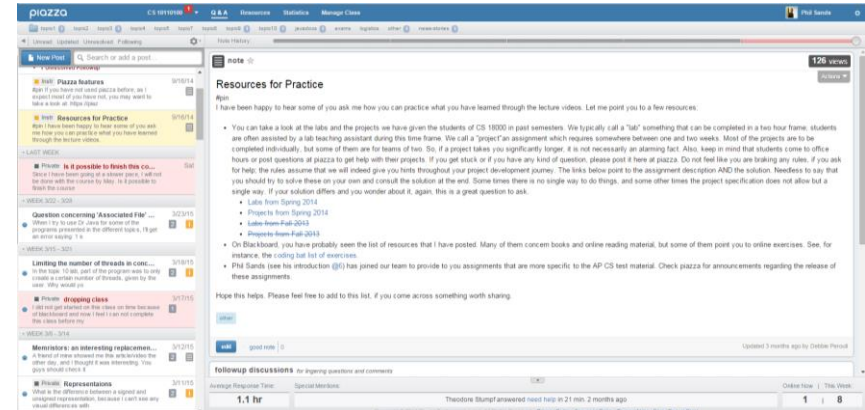UNIVERSITY

ADVENTURES IN CS CAMP 2015

- 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

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ONLINE CS 180 FOR HIGH SCHOOLERS

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Self-paced online version of Purdue's first programming course
- Sept. 1: 112 students, 40 female
- Students are able to take AP exam upon completion
- Taught by Debbie Perouli and Phil Sands, supported by UTAs

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PURDUE COLLEGE OF 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

http://www.purdue.edu/enrollmentmanagement/researchanddata/enrollment-summary/2014/fall/Sci.pdf

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MAGIC MENTORING

- Purdue students mentoring 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

magic

MENTORS FOR ASPIRING GIRLS IN COMPUTING

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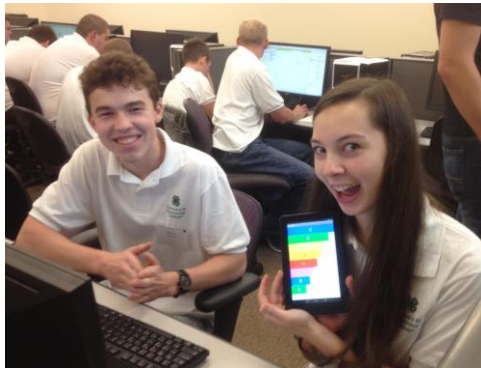
https://www.facebook.com/PurdueMAGIC

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

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CS TEACHER WORKSHOPS

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

csta

INDIANA HOOSIER HEARTLAND

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QUESTIONS?

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