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CS K-12 OUTREACH

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K-12 OUTREACH COORDINATOR

September 16th, 2013

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

- Indiana's K-12 enrollment (2012-13): **1,041,311**
- Indiana AP CS A exams / total AP exams (2011-12): **247 / 65970 (0.37%)**
- Percentage of Purdue enrollees reporting (2012)
 - that they took no CS courses in high school: **37.5%**
 - that they intended to major in CS: **4.1%**
- Fall 2013 Purdue CS
 - enrollees / total enrollees: **186 / 4768 (3.9%)**
 - undergraduates: **878 / 29440 (3.0%)**

<http://compass.doe.in.gov/dashboard/overview.aspx>

<https://www.purdue.edu/enrollmentmanagement/researchanddata/studentdataindex.html>

<http://research.collegeboard.org/programs/ap/data/participation/2012>

ADVENTURES IN CS CAMP 2013

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INDIANA-HOOSIER-HEARTLAND CSTA

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Officially formed first Indiana-based chapter of CSTA
- Continued conversation about future of CS education in Indiana
- Encouraged membership to attend national meeting in Boston, MA



REACH OUT FOR COMPUTER SCIENCE

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OUTREACH PROGRAMS 2013-14

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE

- Expanded **Adventures in CS Camp** for 2014
 - Middle school camp with increased enrollment
 - High school camp offering



OUTREACH PROGRAMS 2013-14

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- Mentorship program for high school girls in technology
 - University CS students mentor high school students
 - High school students mentor middle school students
 - Focus on programming, app development, web design, robotics
 - Corporate partner site visits
 - Semester end celebration
 - Fishers, IN and Hammond, IN

OUTREACH PROGRAMS 2013-14

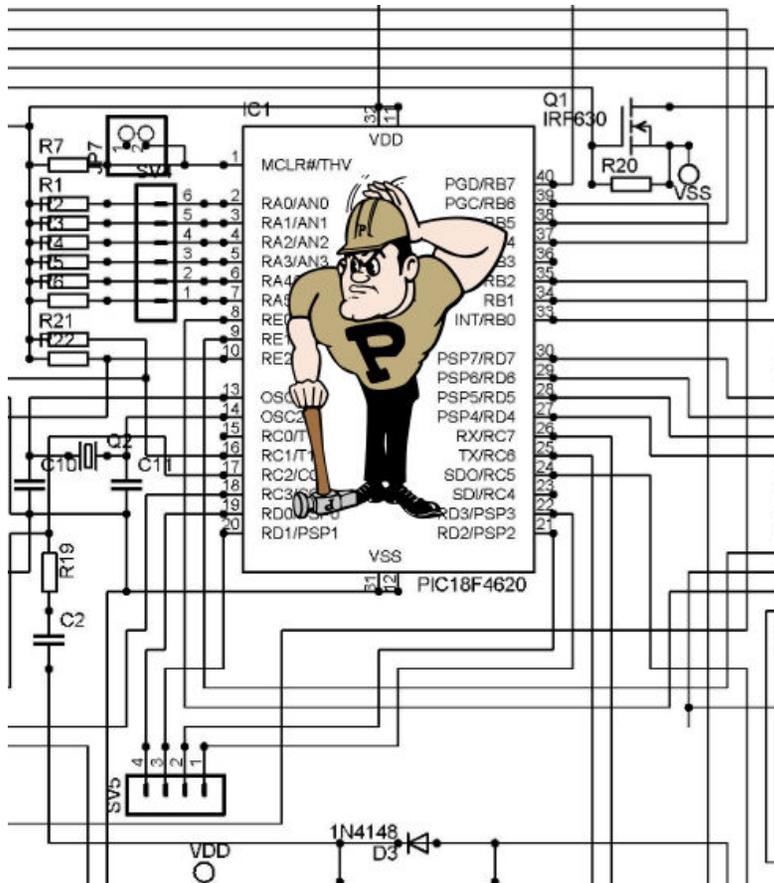
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- **Elementary STEM Workshop**
 - Getting computational thinking activities in K-5 classrooms
 - Tynker and Scratch
 - Lego Mindstorms
- **New Community School Tech Club**
 - Technology club for K-7 students
 - Lafayette, IN



OUTREACH PROGRAMS 2013-14

PURDUE K-12 OUTREACH FOR COMPUTER SCIENCE



- **CSTA website and summer institute**

- Aiding CS teachers with curriculum

- **CS Ed Week**

- Raising awareness of CS education

- **ROCS and general outreach**

- School visits
- CS conferences and events

LAST REQUEST...

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QUESTIONS?

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