Who we are

Learning with large projects
Community Service Award

National ACM Award

Work with official Purdue app

PROS: used by over 2000 teams worldwide
High School Coding Competition

Probably our most exciting event of the year

29 teams competed at Purdue

Similar to official ACM-ICPC format

Students had a blast
ExactTarget 24 Hour Hackathon

Smaller hackathon for Purdue students only

About 10 teams competed

Fun event in the “Hackathon off-season”
Interview Night with USB

Roughly 30 students

Mostly freshmen and sophomores

Focus on technical side of interviews
Isilon Student Appreciation

End-of-semester party in the Fall
Cookie party for CS252 class after first exam
What’s next?

500 Miles Tech Talk
SMU Guildhall Tech Talk
More interview prep
Some more focus on hackathons
Applied Computer Science
	Eric Templin
	David Tschida
	Michael Hockerman
SafeWalk
Purdue App
This year

● Tutorials
  Android, iOS, Web Service Development, GoLang, NodeJS, and more

● Made Purdue app fully native

● Redesigned backend components of Safewalk
SIGART
Artificial Intelligence
Special Interest Group for Artificial Intelligence
Projects
This semester

- Chess AI competition sponsored by Interactive
- Teams competing against each other
Lee Anne Opfer, President
Game Developer’s Conference

First time in SIGGD’s history
Great experience to see unique ideas
Hoping to send more members next year
Game Jam

36 hour hackathon
Teams of 3
Used Unreal Engine 4
to quickly prototype games
SIGSAC

Reverse engineering binaries in Linux

Capture the Flag

Cryptocurrency seminars

Network security
SIGBOTS
Major Goals

- Create mechanical reusability
- Increase reliability through controls
- Fine tune software with rapid prototyping
- Develop inter-robot communications
Mechanical Reusability
Configurable Drivetrain

- Optimal gear ratio achieved through swapping sprockets
- Scalable to large and small robots
Controls
Liberal Use of PID Controls

- **Lift**
  - P control to set height
  - PD control to sync left and right sides

- **Drive**
  - PI control for driving straight
  - PD control for rotation

- **PD control on Skyrise builder arm**
Rapid Prototyping
Real-time Scripting (RTS)
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- Takes ~30 seconds to flash code to the robot
- Flash once, run as needed
- Create autonomous scripts and tune PID controllers
- Reduce development time by more than 50%
Inter-robot Communications
Four Is
Four Is

- Inter-robot I2C Infrared Interface
- Achieves UART-level baud rates
- Enables development of synergetic autonomous operation
Growing Up

- The game as a catalyst for our learning
- Members get industry-like experience not taught in the classroom
- Team is cross-discipline, all majors reap the benefits
Destination: Louisville

Watch online
4/16 - 4/18