



**Purdue Chapter  
Association for Computing Machinery**

President: Logan Gore

# What is ACM?

A collection of groups focused on fields in computing

- Game Development
- Artificial Intelligence
- Robotics
- Etc...

Host Special Events

- Company Tech Talks
- Help Sessions
- Student led Talks
- Programming Competitions
- Hackathons



# High School Coding Competition

## Practice Competition in Carmel

- Ten students competed
- Three hour competition
- They all wanted to try again!



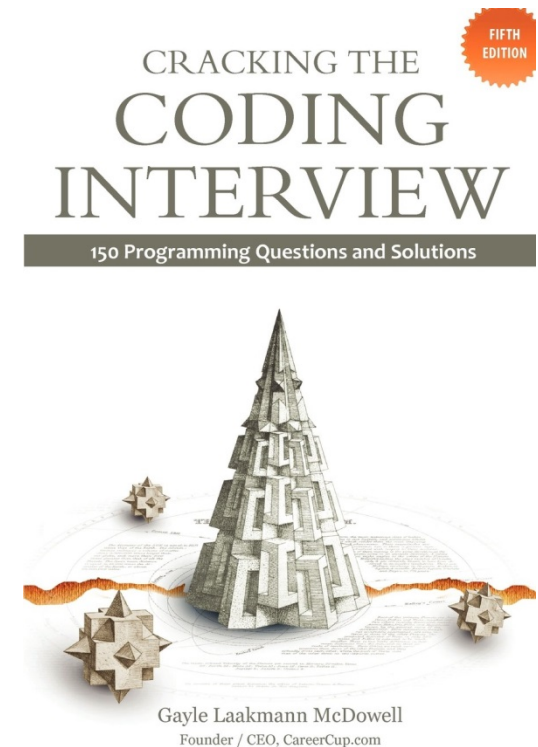
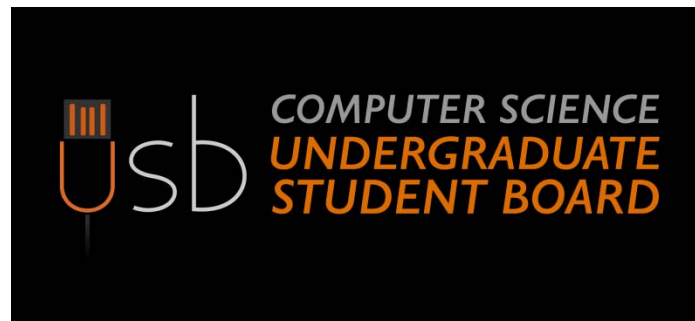
## Fall Competition

- November 1<sup>st</sup>
- Sponsored by ExactTarget
- Students all over Indiana
- Teams of two



# Mock Interview Night

- Sponsored by Qualcomm
- Giving away Cracking the Coding Interview
- Partnering with USB
- 50 – 75 students
- 30 minute technical interview
- Student interviewers

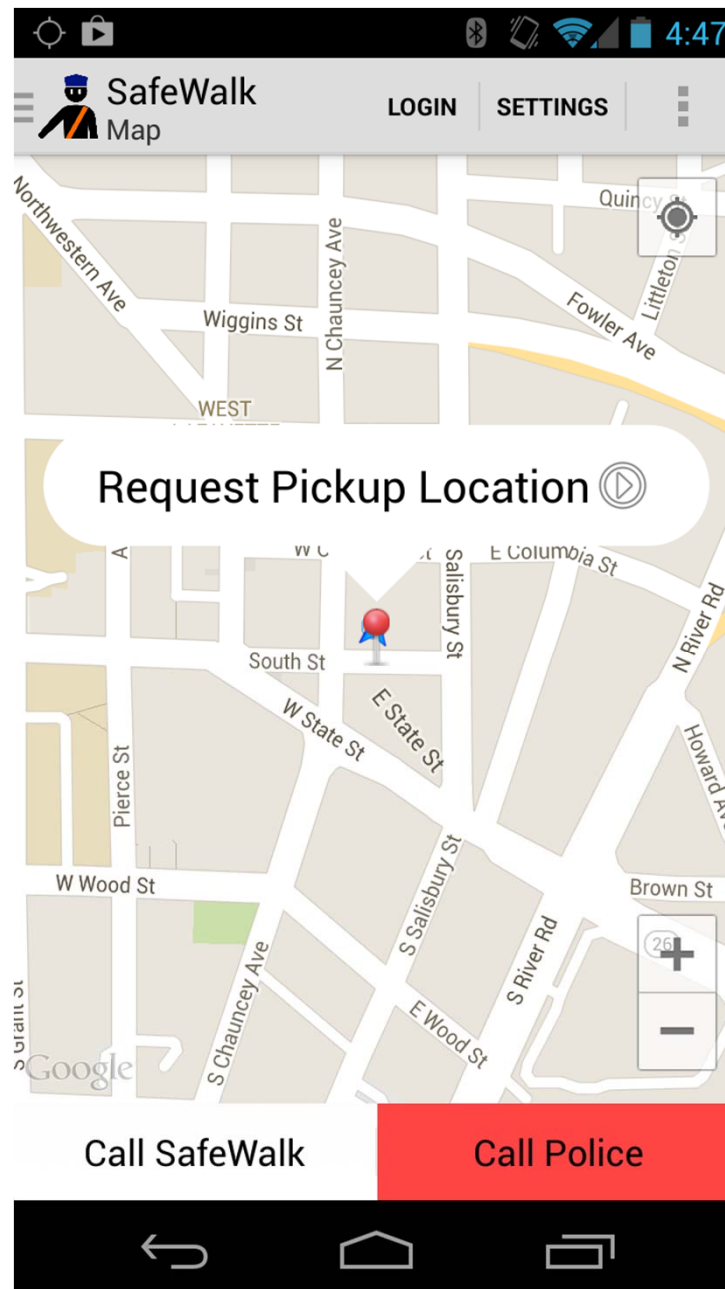




Applied Computer Science

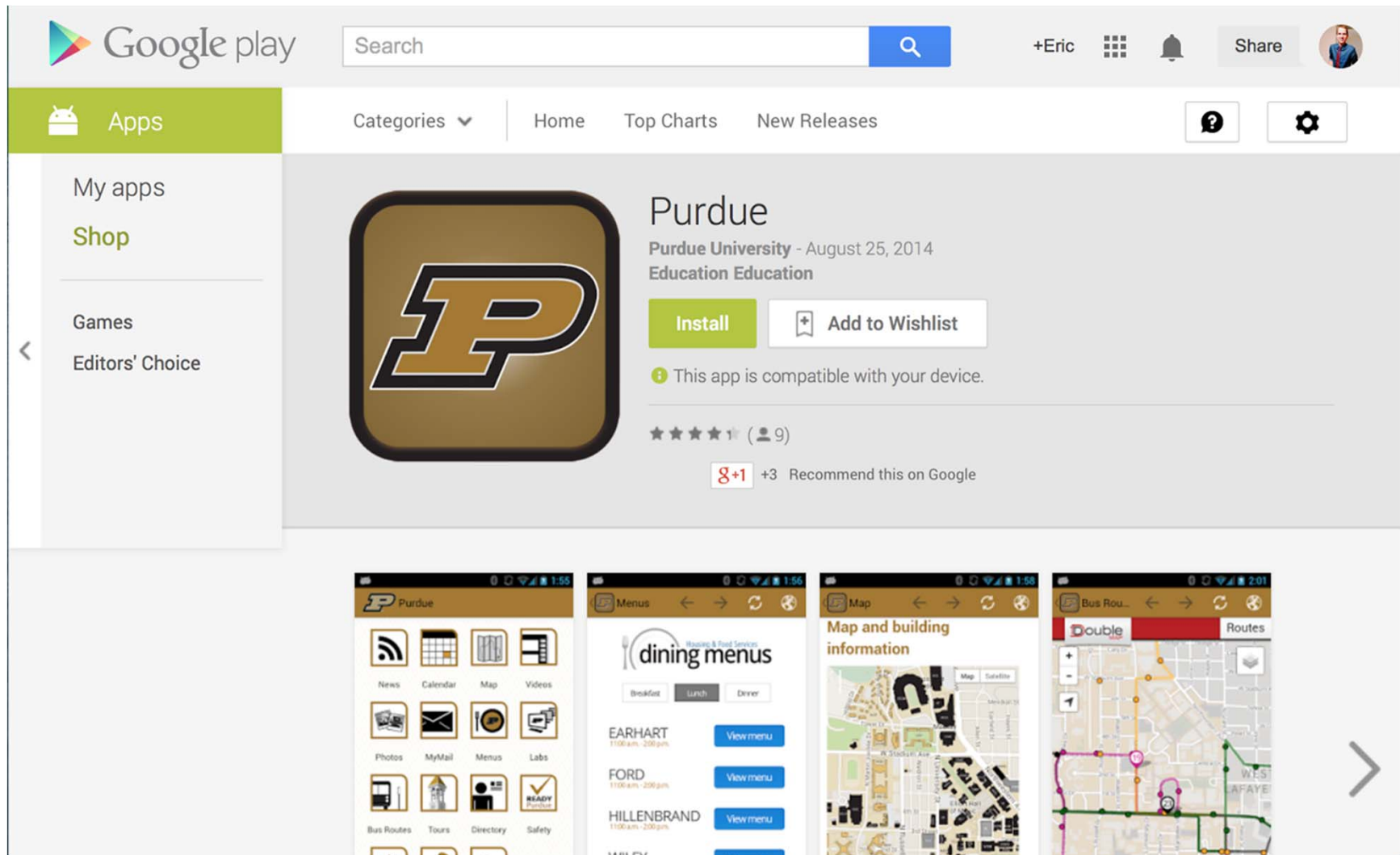
Eric Templin

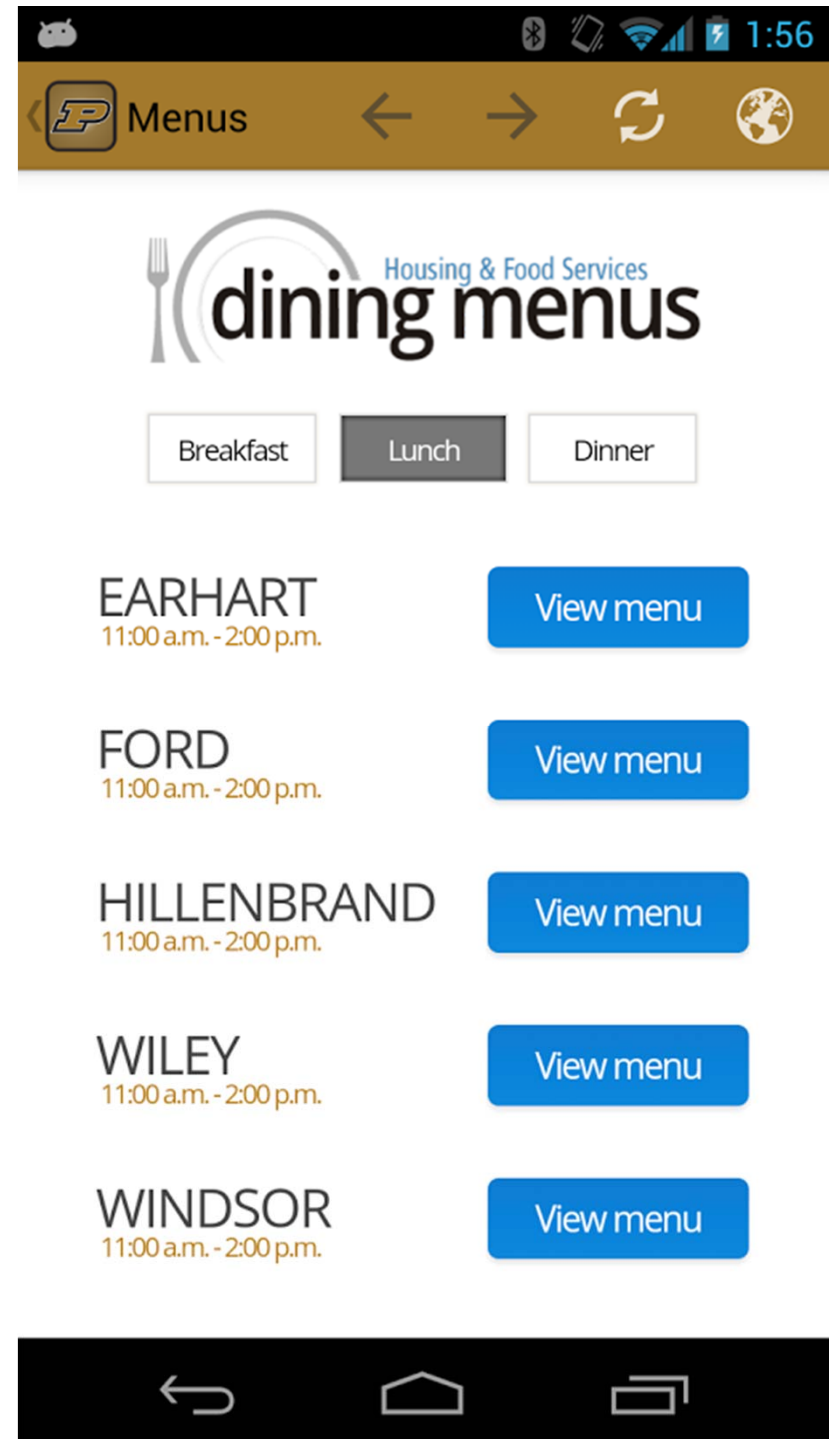
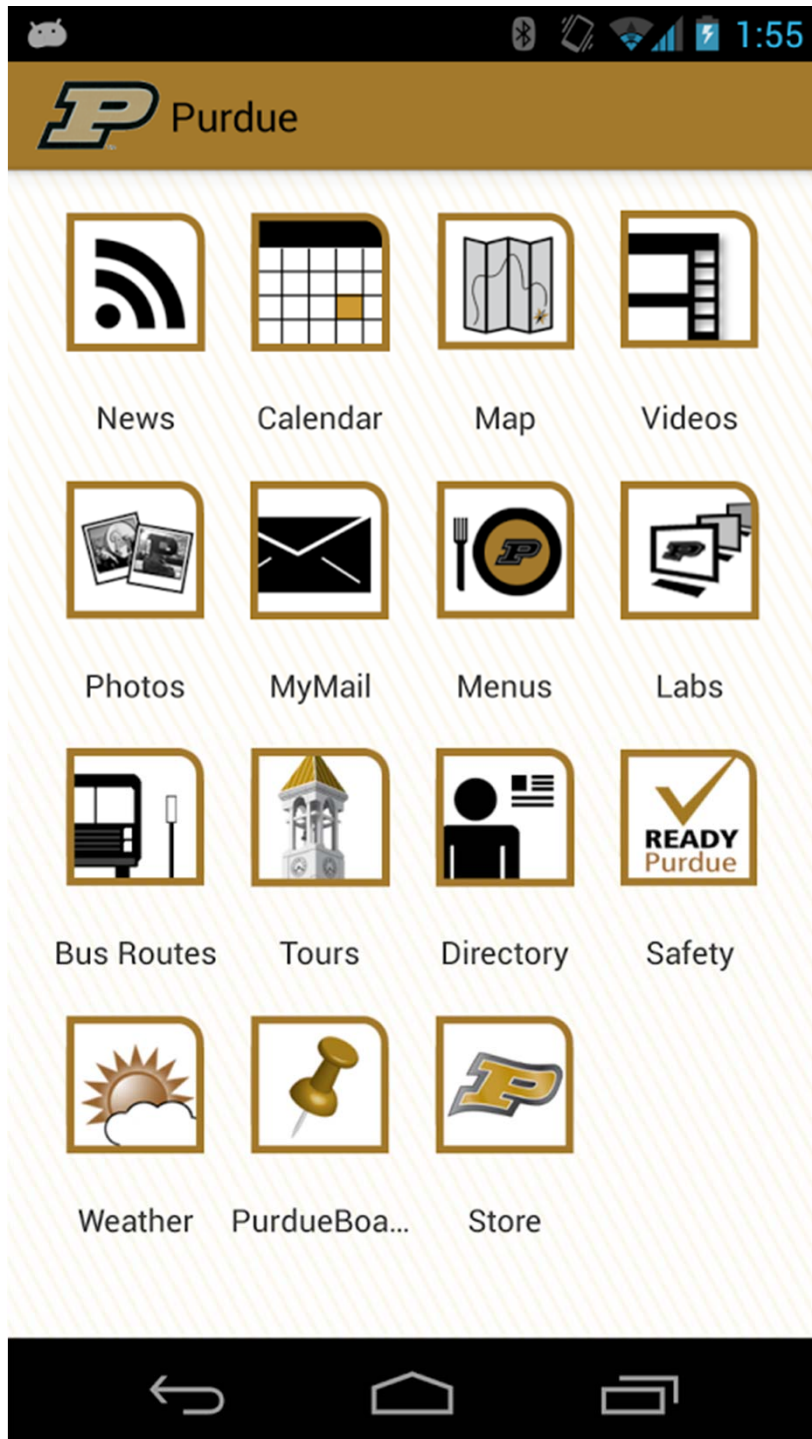
# SafeWalk





# Purdue App







# This Year

- Provide tutorials on iOS and Android app development.
- Continue adding features and maintaining the Purdue app.
- Continue work on SafeWalk on iOS and Android and release by the end of the spring 2015 semester.
- GitHub: <https://github.com/Purdue-ACM-SigApp>

# SIGART

## Artificial Intelligence

SPECIAL INTEREST GROUP FOR  
ARTIFICIAL INTELLIGENCE

# FOCUS AND PURPOSE

## **Team-based projects**

- Complement coursework
- Collaborate and practice project management

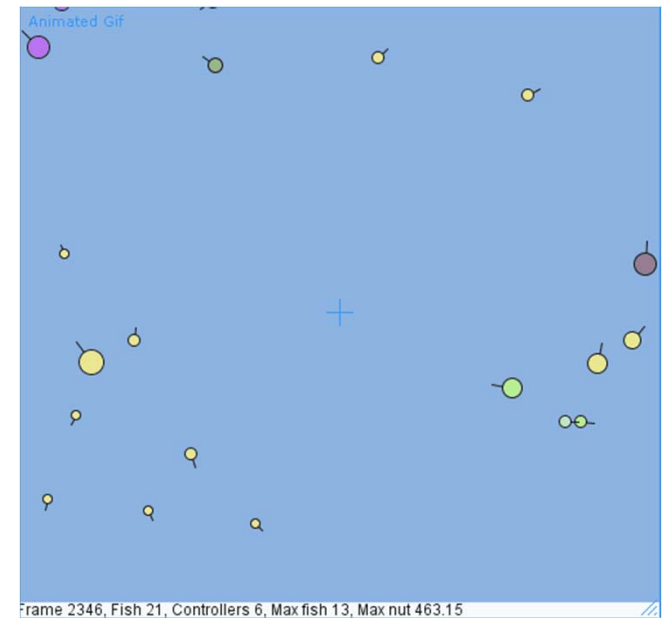
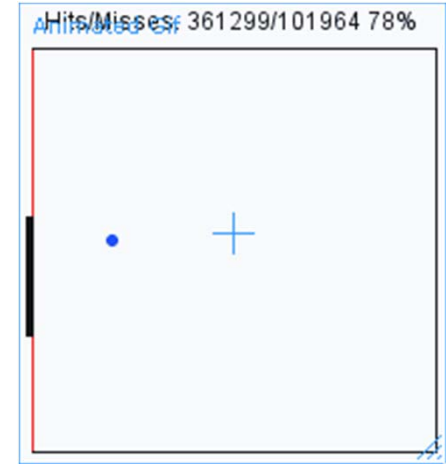
**Discuss current technologies and implications of AI**

**Work on interesting and unsolved problems**

# PROJECTS

## Past

- Single-player pong
- Competitive team-based fish sandbox
- Shredded document reconstruction



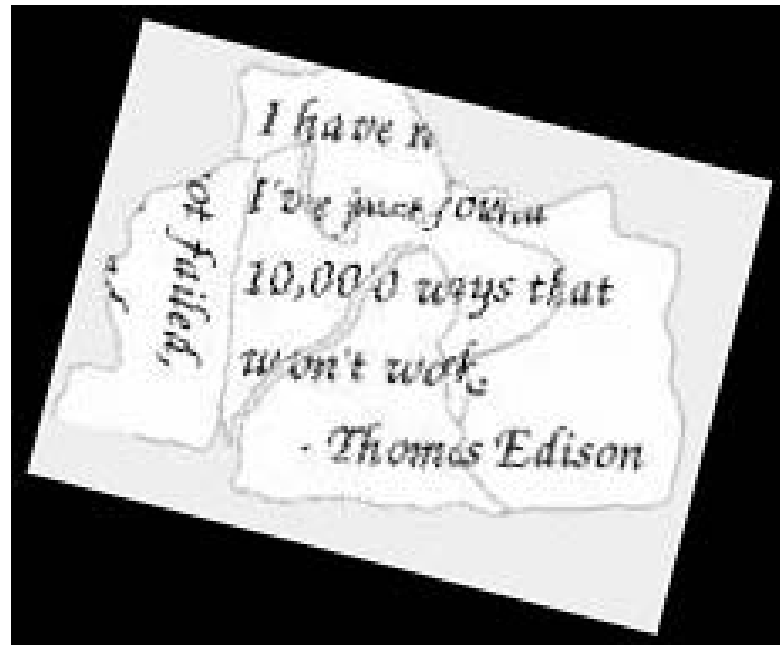
# DOCUMENT RECONSTRUCTION

**Search space optimization**

**Background subtraction**

**Blob detection**

**Curvature, shuffle, edge, and shoelace solvers**



# THIS SEMESTER

- Robocode





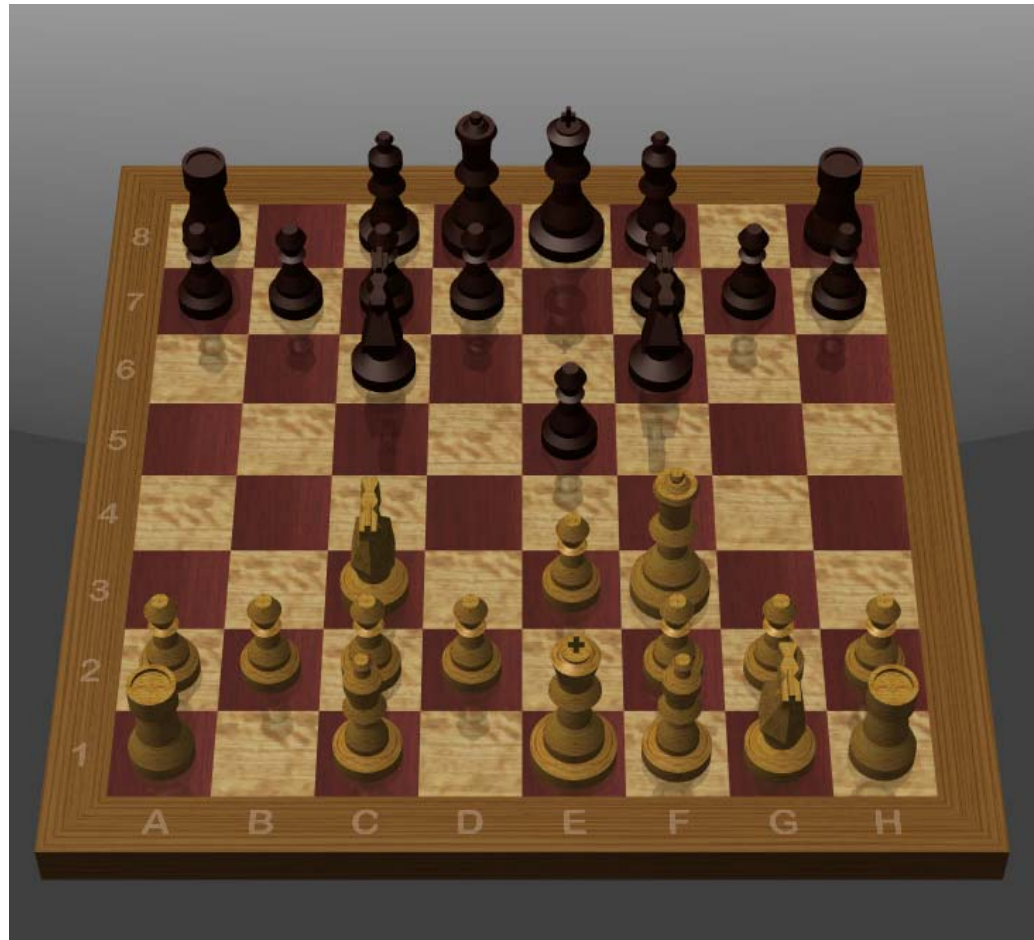
# THIS SEMESTER

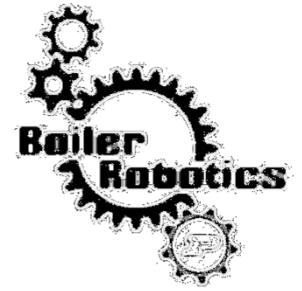
- **Winter Bells**



# THIS SEMESTER

- Chess

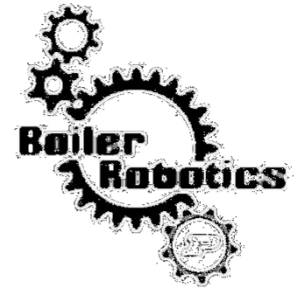




# ACM Special Interest Group in Robotics

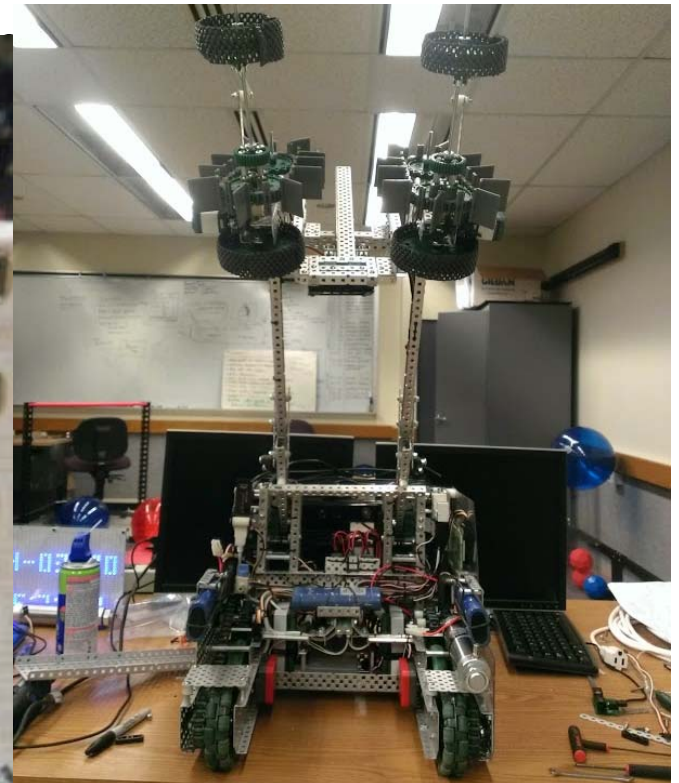
Javid Habibi  
[jhabibi@purdue.edu](mailto:jhabibi@purdue.edu)

**PURDUE**  
UNIVERSITY

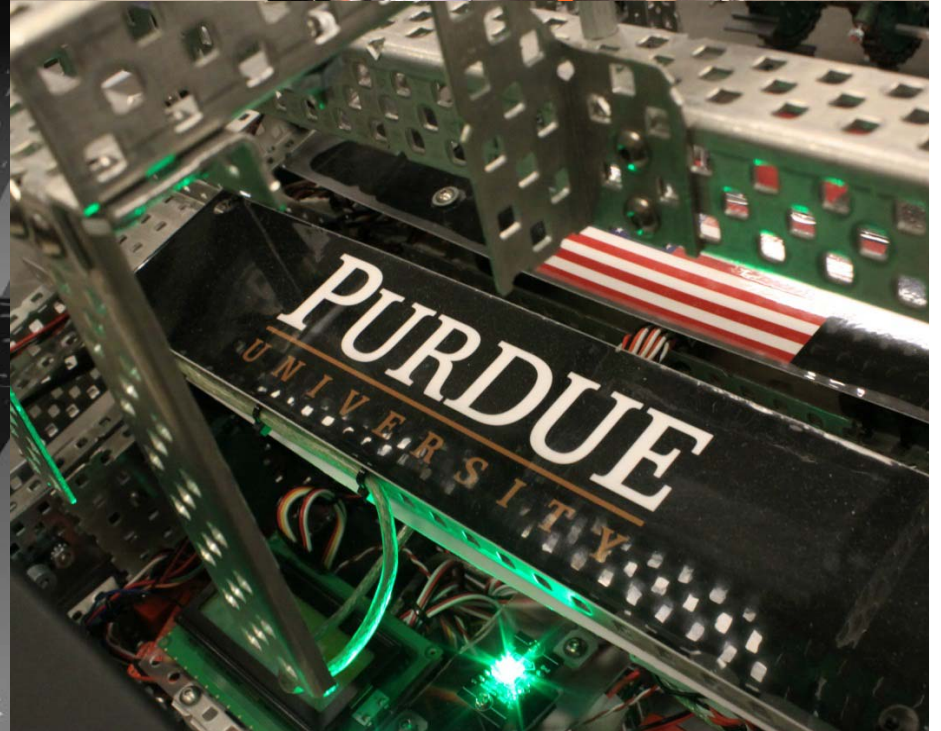
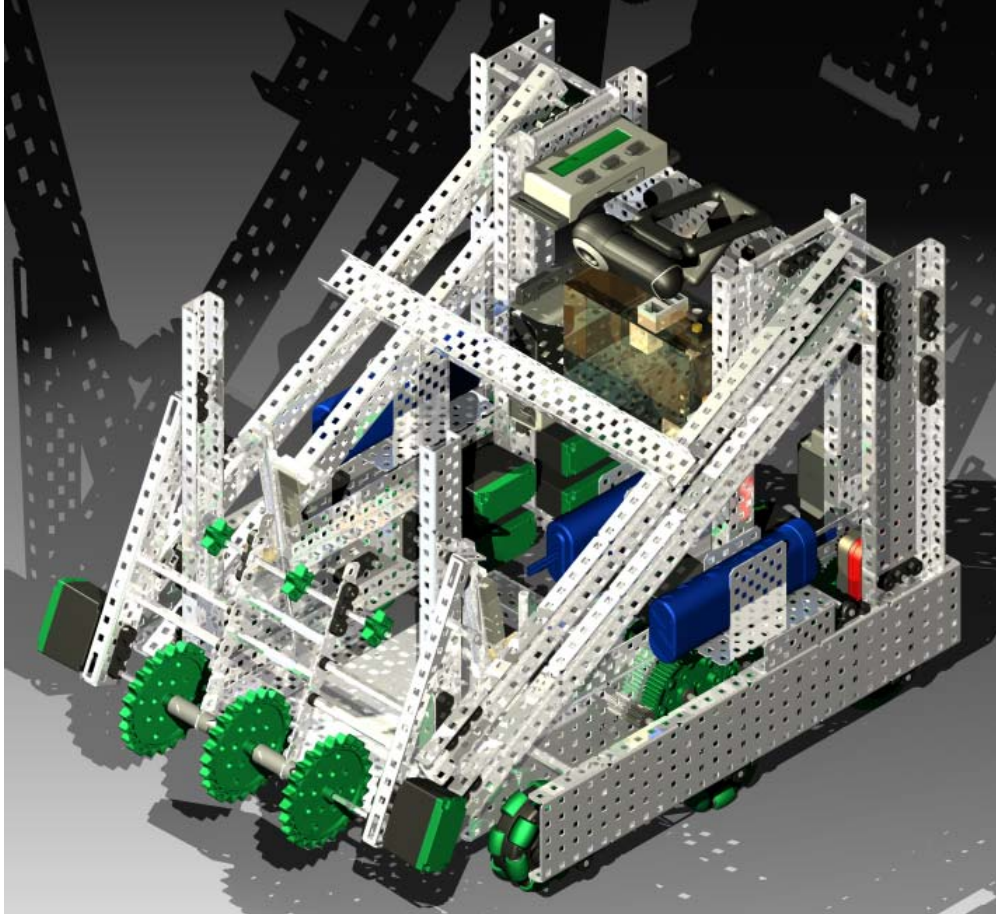
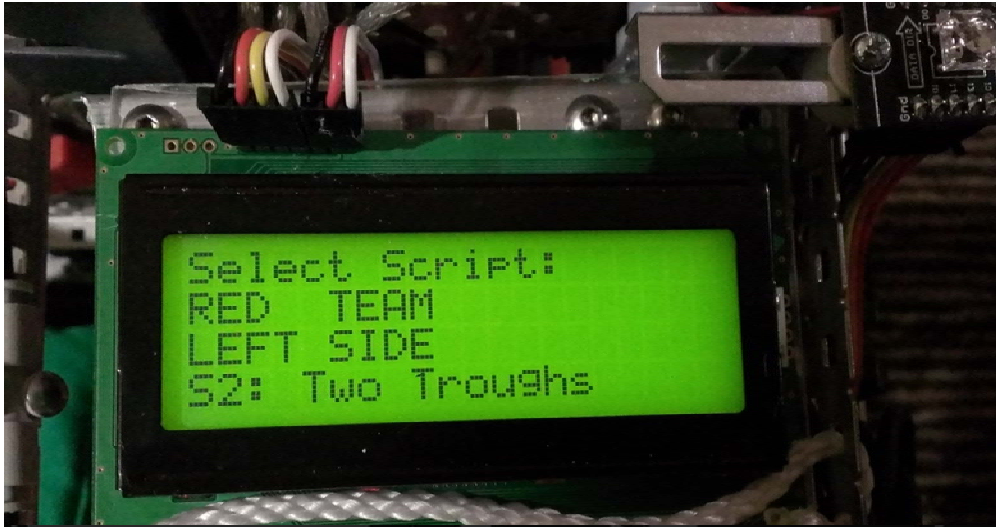


# Who are we?

- One of many different Special Interest Groups (SIGs) within ACM
- Competitive Collegiate level robotics team











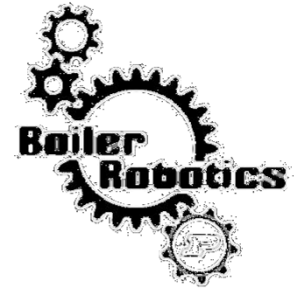


# Past Accomplishments

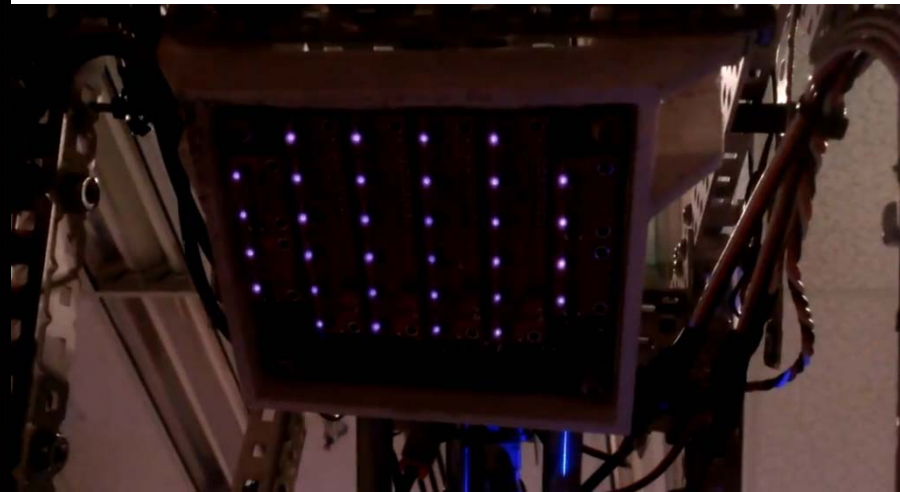
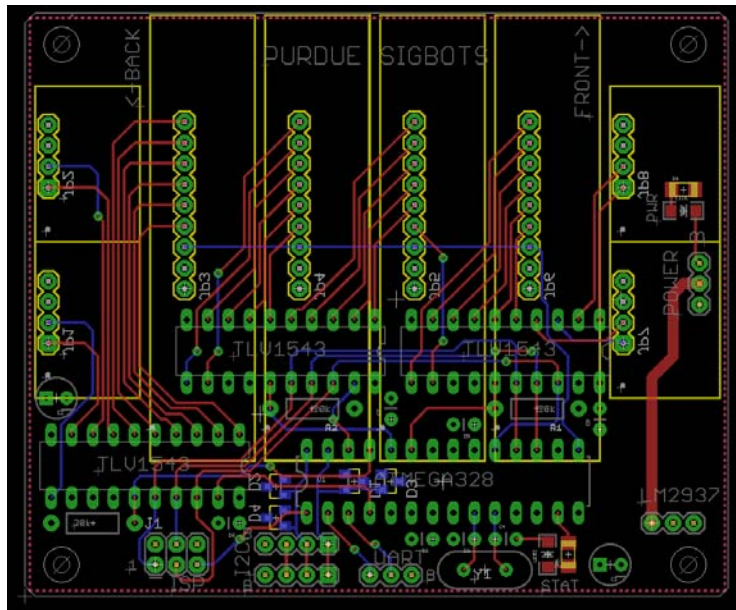
- Vex Robotics World Championship
  - 2<sup>nd</sup> place in programming
  - Innovation Award (2013 & 2014)
- Purdue Vex U Fall Challenge
  - Tournament Champions



# Past Accomplishments

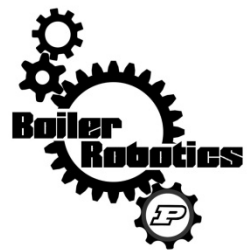
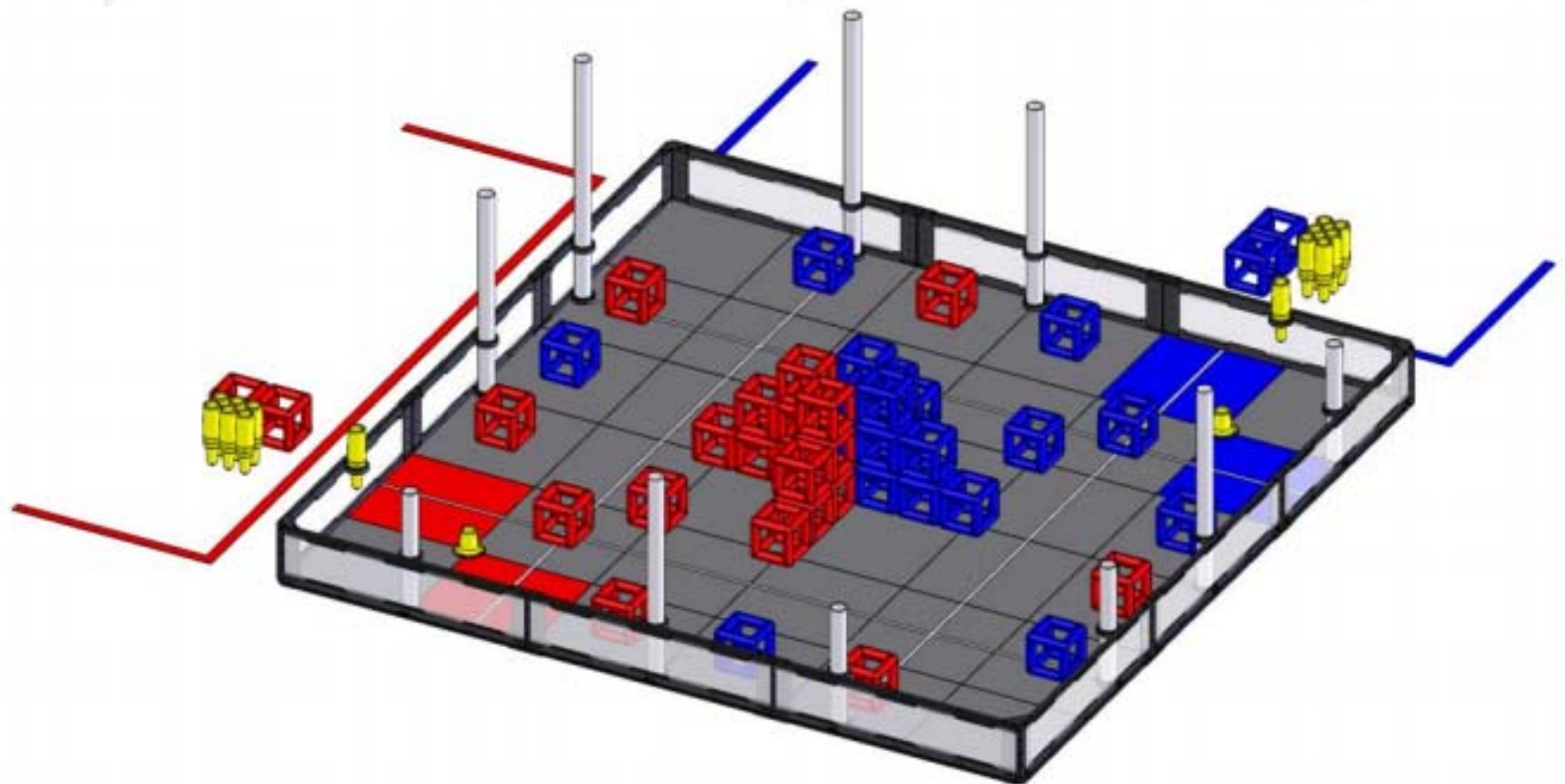


- Reflectance & Analog Data Interpretation Unified Sensor (R.A.D.I.U.S.)
  - Utilizes 32 infrared reflectance sensors
  - Preprocesses all raw data on the sensor and feeds PID values to the primary microcontroller
  - Allows robots to track lines at any angle at maximum speed



Where do I come in?

# New Game...



# Meetings

- Software  
Tuesdays 7:00pm  
HAAS 151
- Electronics  
Wednesdays 7:00pm  
HAAS 151
- Mechanics  
Thursdays 7:00pm  
HAAS 151
- Everyone  
Sundays 2:00pm  
HAAS 151

President: Javid Habibi  
jhabibi@purdue.edu

Co-Vice President: Wes DeWitt  
dewittw@purdue.edu

Check our website for updates!  
<http://www.purduesigbots.com>

Co-Vice President: Jamsheed  
Habibi  
Jamsheed.habibi@gmail.com



High Performance Computing

Kurt Kroeger



# sighpc High Performance Computing

- HPC uses supercomputers to solve advanced computational problems
- Focused on distributed work that cannot be done by one machine
- Purdue currently has the 24th and 176th fastest supercomputers in the world



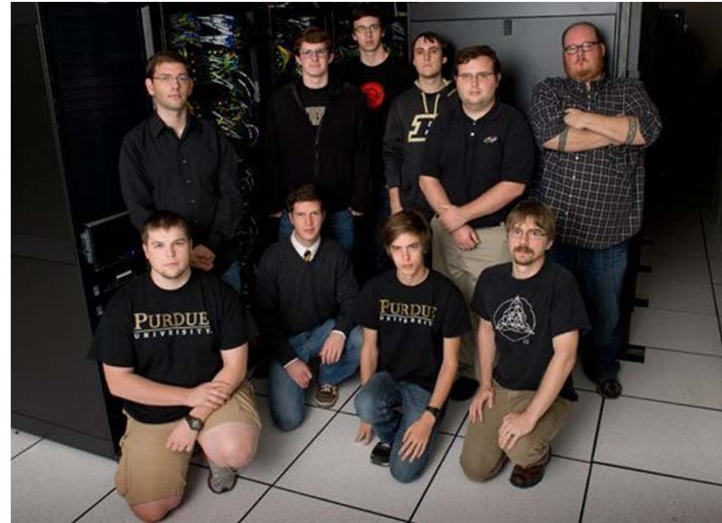


High Performance Computing

SIGHPC's mission at Purdue is to help raise awareness of the profession to undergrads, and to help ensure a rich and rewarding experience for students interested in the field via participation in the Student Cluster Challenge.

## Student Cluster Challenge

- Any hardware fitting within 3kW power limit
- Given multiple apps and datasets
- High LINPACK + Most Datasets = Winner





High Performance Computing

What are we looking for?

- C (Compiling, Flags, Make)
- Systems Administration
- Driven
- Passport

# **sighpc** High Performance Computing





High Performance Computing

Contact me at **kkroege@purdue.edu**





# What's SIGSAC?

## Cool Security Stuff



# Partners

- CTF –  
b01lers
- Cyber  
Forensics
- Bitcoin



**b01lers**

# Events

- Corporate Partner Talks
- CTF Challenges
- Topics in Cyber Security
- Member driven projects



<sup>+</sup>  
siggd

ACM Special Interest Group on Game Development

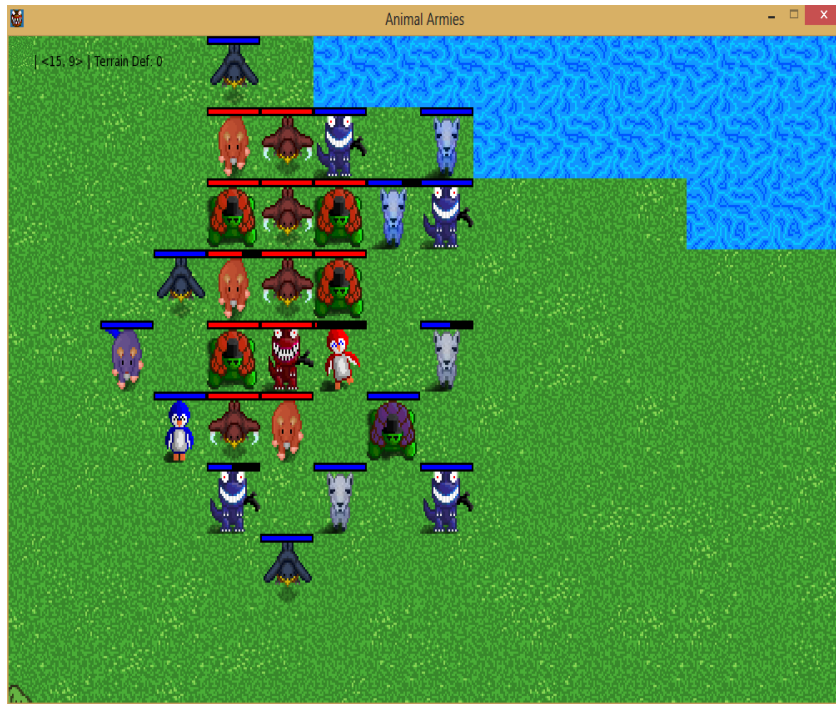
Lee Anne Opfer, President

# About Us

- Founded in Fall 2011
- Multidisciplinary team



# Past Projects



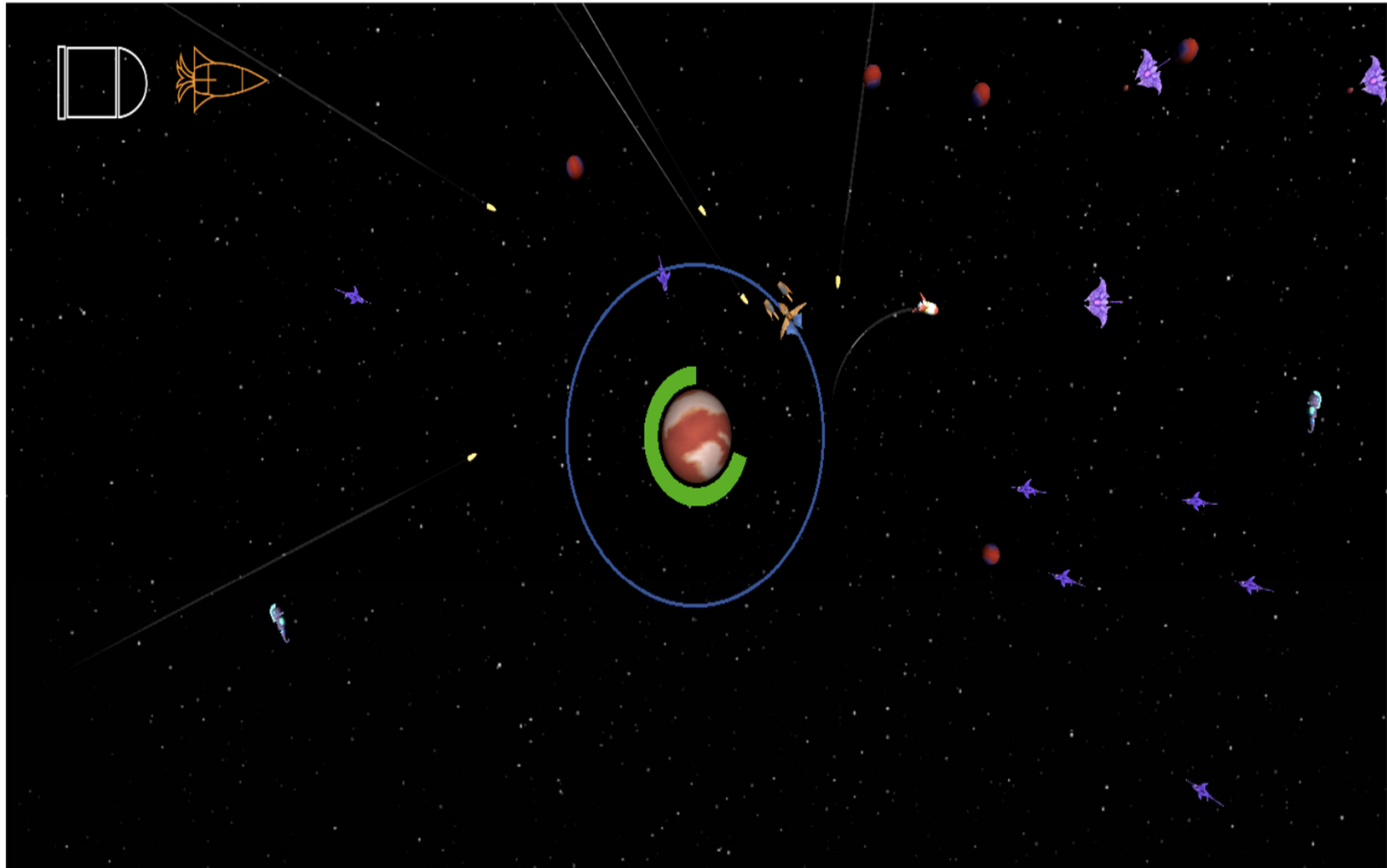
Animal Armies



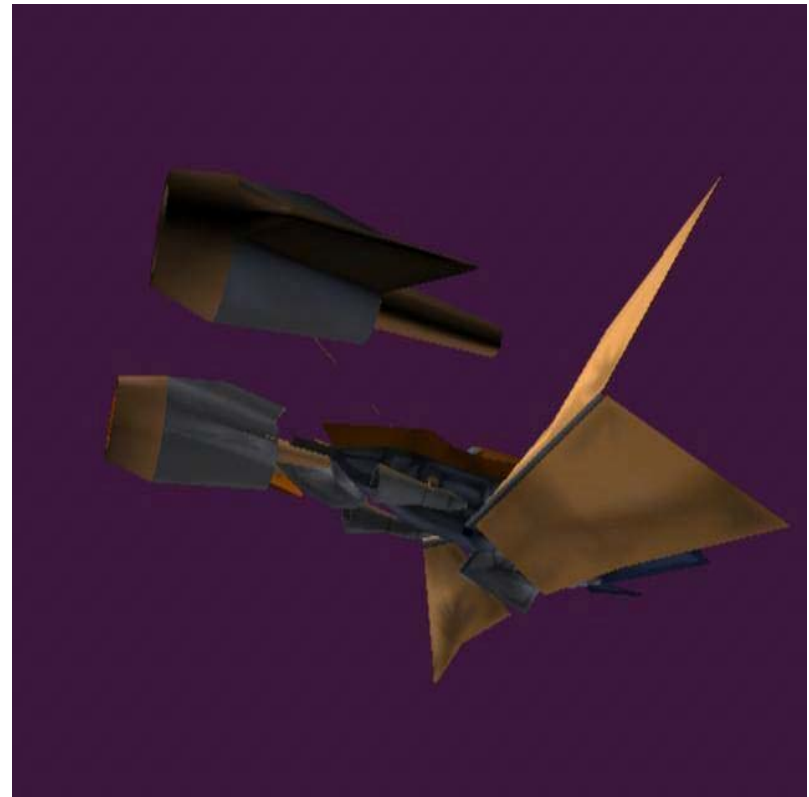
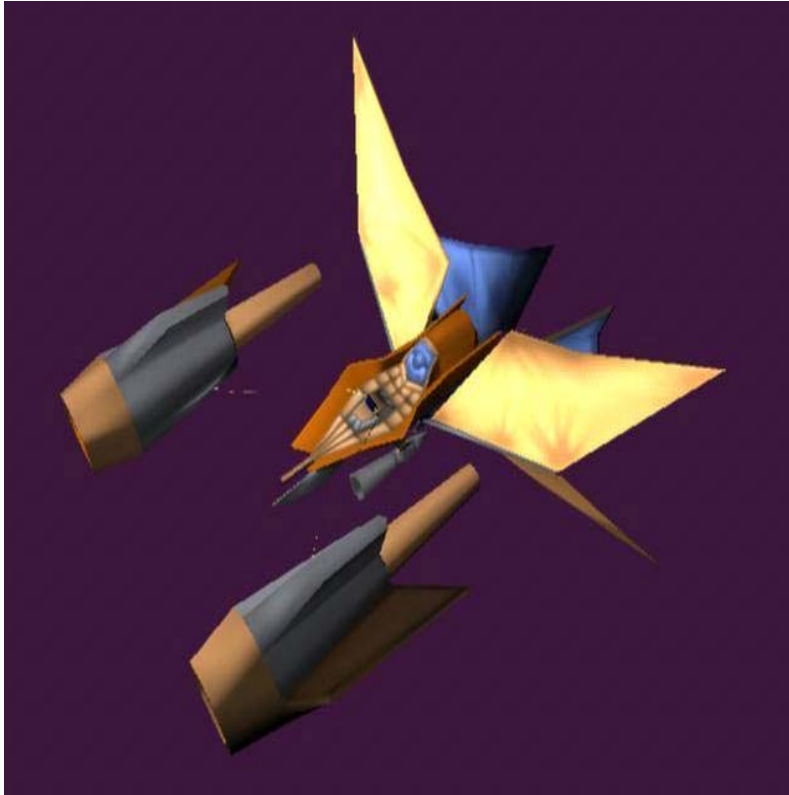
Blob Game



# 20,000 Leagues Under the Sea



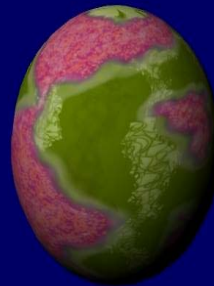
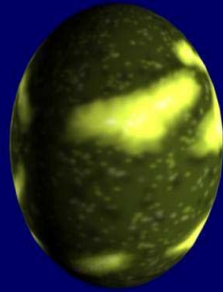
# Player



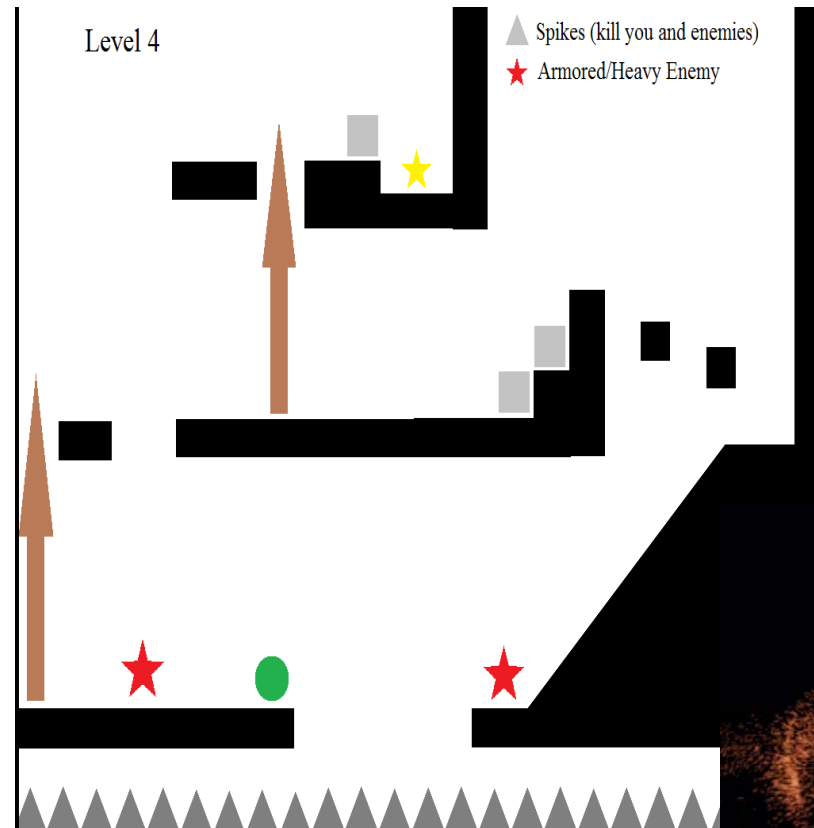
# Enemies



# Planets



# Player As Platform





# For the Future



# Contact Information

- Lee Anne Opfer
- Email: siggd.purdue@gmail.com
- Like us on Facebook

