

A large, solid blue diagonal shape that starts from the top right and extends towards the bottom left, creating a split background of white and blue.

ACM

Fall 2018



Special Interest Group for
Artificial Intelligence



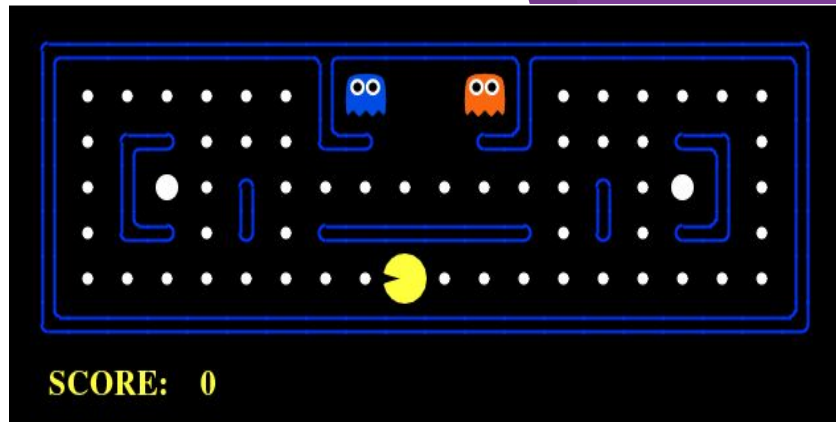
What is SIGAI?

- ▶ Semester or year long projects
- ▶ Talks on AI-related topics
- ▶ Real-world experience

Last Year (Fall): PacMan AI

Framework included useful functions such as:

- ▶ Distance functions
- ▶ Ghost positions
- ▶ All legal actions for an agent
- ▶ Food locations



Last Year (Spring): Machine Learning

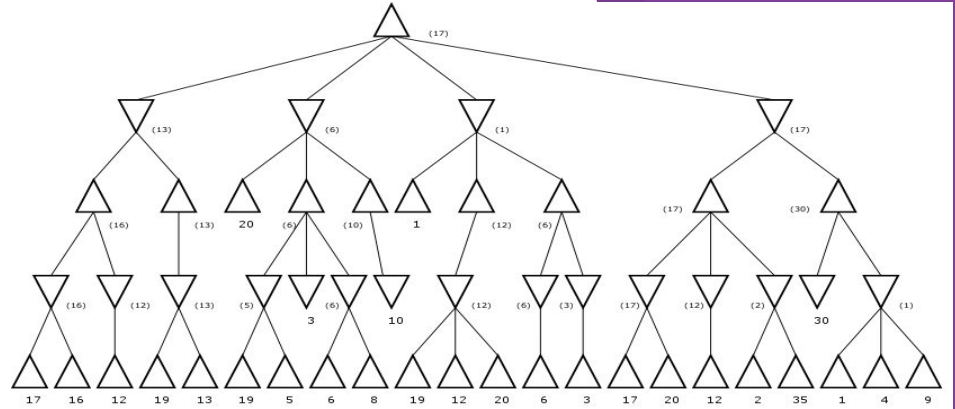
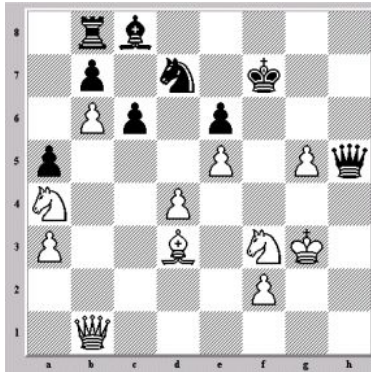
- ▶ Had some lectures and covered topics such as Naive Bayes, neural networks and introduced Python
- ▶ Created a basic spam filter using ML techniques
- ▶ Worked on a Snake AI using neural networks



Chess A.I. (Fall 2016/Spring 2017)

Things we covered included:

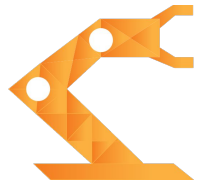
- ▶ Graph Search Algorithms
- ▶ Chess Theory
- ▶ Genetic Algorithm



Fall 2018 Semester Plans

- ▶ Doing more machine learning
- ▶ We will be following Google's Machine Learning course
- ▶ Apply this knowledge to real data in the form of a Kaggle competition
 - Kaggle is platform to compete with others in competitions which are based on machine learning tasks.
- ▶ Kaggle winners get a prize





SIGBOTS

Special Interest Group for
Robotics

WHAT WE DO

- ▶ Build, program, compete in VEX U Robotics Competition
- ▶ Custom 3D printing, part fabrication, electronics
- ▶ Build development environment (PROS) used by a couple thousand teams around the world

purduesigbots.com
pros.cs.purdue.edu

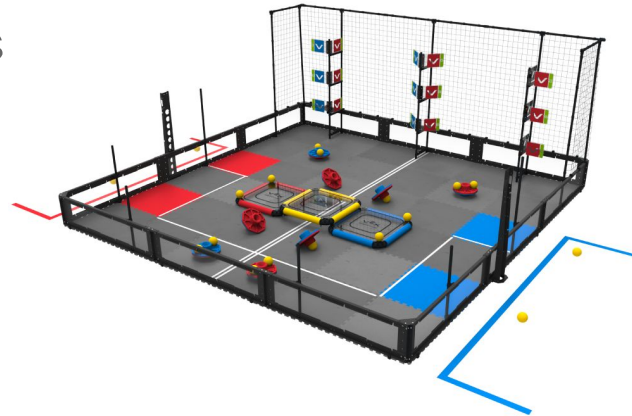
2017-2018 Competition - In The Zone

- ▶ Two events each year hosted at Purdue in Lawson
- ▶ Our competition is one of the biggest in the US
- ▶ World competition in Louisville, KY



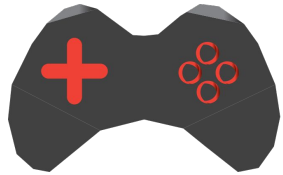
2018-2019 Competition - Turning Point

- ▶ Two robots per team instead of one
- ▶ Many new strategies come into play with two robots a team
- ▶ Required to use new V5 motors and robot brain
- ▶ Custom fabrication of parts



Goals and Projects for this Year

- ▶ As always, we aim to make it to the world competition
- ▶ PROS 3 was just released for the new Vex hardware
- ▶ Create a new subteam to handle the strategy aspects of this year's game
- ▶ Make use of 3D printing and part fabrication to manufacture custom parts



SIGGD

Special Interest Group for
Game Development

WHAT WE DO

- ▶ Work on annual game projects as a multi-disciplinary group
- ▶ Hold Game Jam events for students to compete

More information : purduesiggd.github.io

Grappling Hook Fighters (2015-2016)



Lumina (2016-2017)



Project W (2017-2018)



Future Plans

- ▶ More detailed instruction to using Unity Engine as a development platform
- ▶ Create a new game, explore new mechanics
 - ▷ Multiplayer on single machine
 - ▷ 3D, animations
 - ▷ Server hosting



SIGAPP

Special Interest Group for
Applied Computing

WHAT WE DO

- ▶ Applied Computing == Applying skills from the classroom in a real life project
- ▶ Currently, we maintain 3 Android apps
- ▶ The sky's the limit!

- ▶ More Information: <https://sigapp.club>



Purdue Laundry

Tired of having to go to the laundry room, only to find out that there's no space available? The Purdue Laundry app solves that by having all the details of your dorm's laundry room in the palm of your hand!

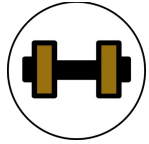
You can even set timers for each machine you are using to be alerted when they are done.



BoilerFaves

BoilerFaves lets you know when your favorite foods are available at Purdue dining courts. With BoilerFaves, you can:

- See which dining courts foods are available at
- Get notifications when foods you like are available
- Set notification times for each meal
- Discover new foods at the dining courts



Purdue CoRec Monitor

Purdue CoRec Monitor provides the ideal interface for checking activity levels within the various facilities provided by the France A. Cordova Recreational Sports Center at Purdue University. Plan your workouts and avoid having to wait for openings within the CoRec's facilities by either checking recent activity or long-term trends.

Future Projects

We're expanding out from Android. Some ideas:

- iOS
- Web
- APIs



Meeting Times:

Tuesdays and
Thursdays at 7pm in
LWSN B160