

# Final Projects

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Sketchy, Othello, Pacman, Evolution,  
Indy

# Sketchy

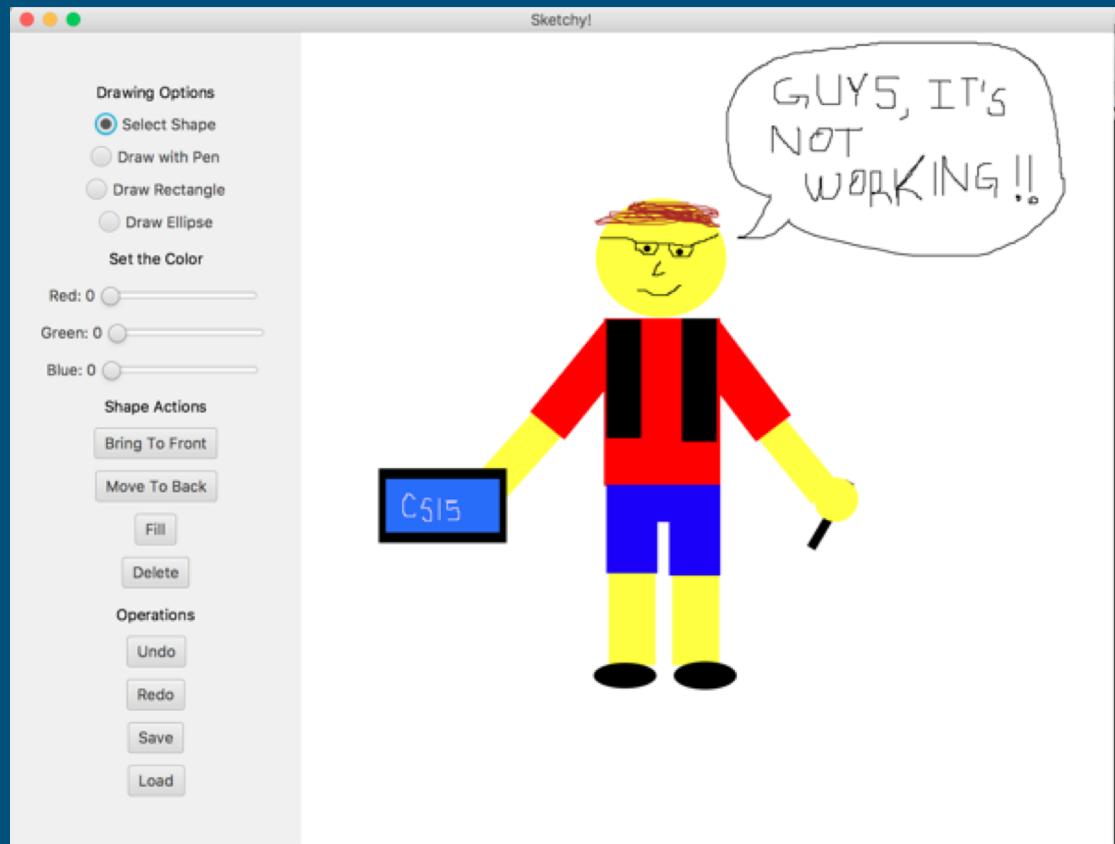
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TAs: Taylor, Lucy, Aalia, Andy,  
Wambui, Cooper, Dora, Georgia, Lily,  
**Niyoshi, Olivia, Nicole, Milla**

# Some info

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- Build an application which lets you make art
- Manipulate shapes (fill color, resize, rotate, etc.)
- Draw lines
- Layer shapes
- Undo/Redo
- File saving and loading



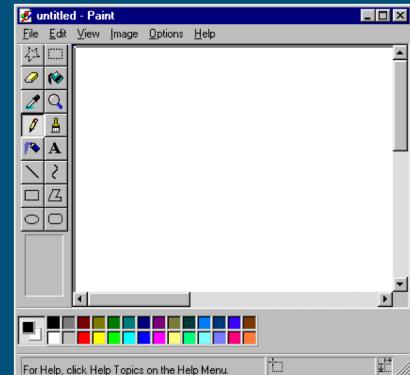
Video

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# Top 5 Reasons to do Sketchy (1/5)

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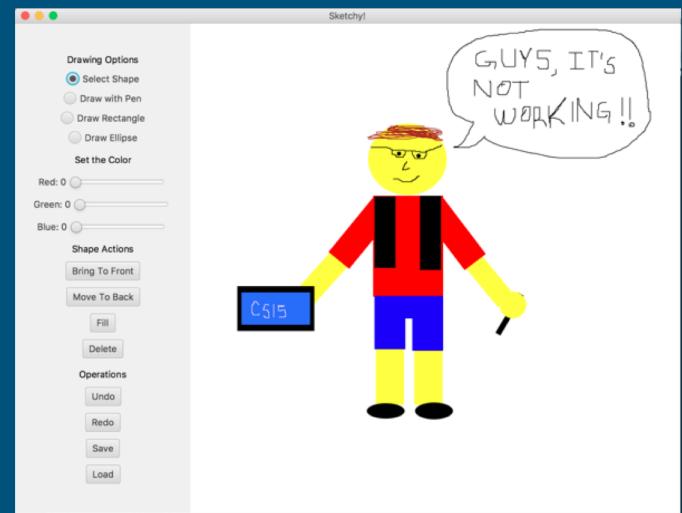
Adobe Photoshop = really complicated????



Windows Paint =



Sketchy = literally the greatest product ever designed



## Top 5 Reasons to do Sketchy (2/5)

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2 HTAs for the  
price of 1

i mean look at  
them

## Top 5 Reasons to do Sketchy (3/5)

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You never have to use Arrays again. Ever.\*

```
int[ ][ ] nums = new int[10][10]
```



\*We can't actually guarantee  
that you'll never use them  
again in your life. Sorry.

## Top 5 Reasons to do Sketchy (4/5)

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I'm sorry, was one shitty arcade game not good enough for you ????

We don't play games.

# Top 5 Reasons to do Sketchy (5/5)

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Real footage of Indy HTA Julie Wang talking about being  
~quirky~ and ~not like other TAs~



# Demo

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# Othello

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TAs: Noah, Maura, Gil, Julia, Lisa, Lucy  
W., Marina, Selena, Sierra, Tom, Tzion



# Some info

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- Othello is a two-player strategy board game also known as Reversi
- Create your own multi-level Artificial Intelligence (AI) player that can play a human user or another AI
- Have ~fun with recursion~ and make an interactive GUI



Video

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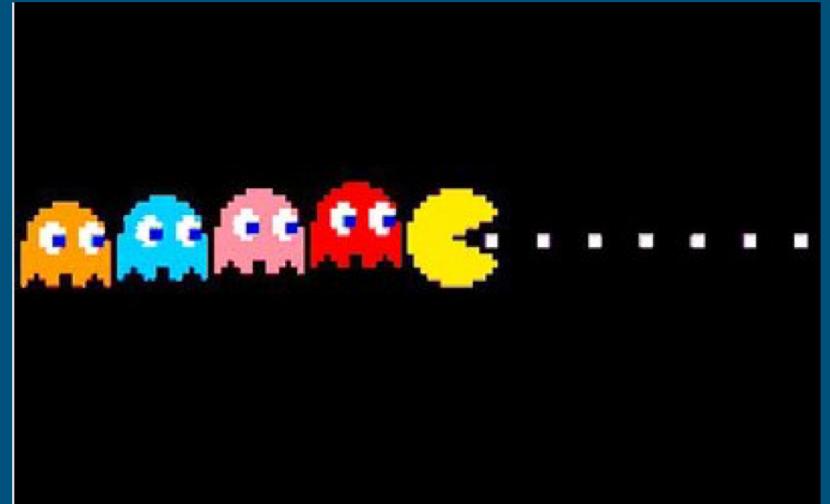
## Top 5 Reasons to do Othello (1/5)

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Because who wants to  
make *another* composite  
shape again

(I mean just look at those ghosts)

(and Sketchy is literally just a tool to make  
MORE composite shapes)



## Top 5 Reasons to do Othello (2/5)



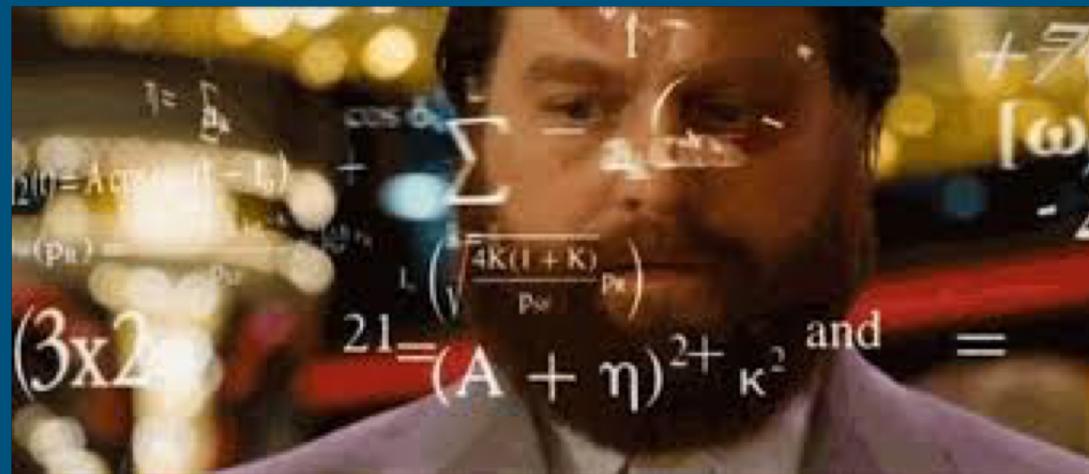
You can play with Oreos.

No argument necessary really. How could you pass this up?

## Top 5 Reasons to do Othello (3/5)

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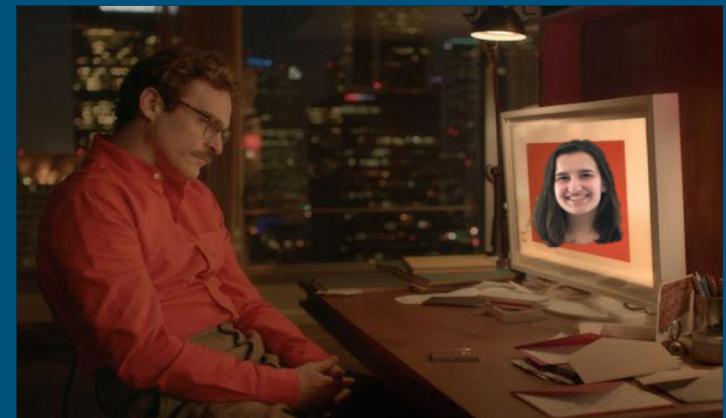
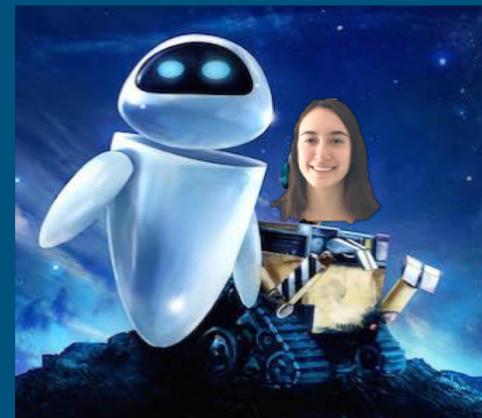
All CS15 TAs that did Othello are now CS15 TAs



## Top 5 Reasons to do Othello (4/5)

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It's more than creating a project.  
It's creating a long-lasting friendship.



# Top 5 Reasons to do Othello (5/5)

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**What are some of the best recursion jokes?**

10 Answers



Anonymous

Written Apr 23, 2013

The best recursive joke

[What are some of the best recursion jokes?](#)



Jokes: [Edit](#)

**What are some of the best recursion jokes?** [Edit](#)

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2 Answers

Asked to Answer (4)

Your friends will never  
get tired of your super  
original and witty  
recursion jokes

## Top 5 Reasons to do Othello (6/5)

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Even Shakespeare says Othello was his greatest accomplishment



**William Shakespeare** @Shakespeare · Nov 15

Othello (the CS15 project not my play) was my greatest accomplishment

3

46

158



# Demos

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# Some info

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- Super rad arcade game
- Write an AI for the Ghosts by implementing a Breadth-First Search algorithm
- Play against said ghosts as you “test your game”
- Opportunities for fun extra credit like fruit and extra levels

andy mf van dam  @avd • November 19, 2019

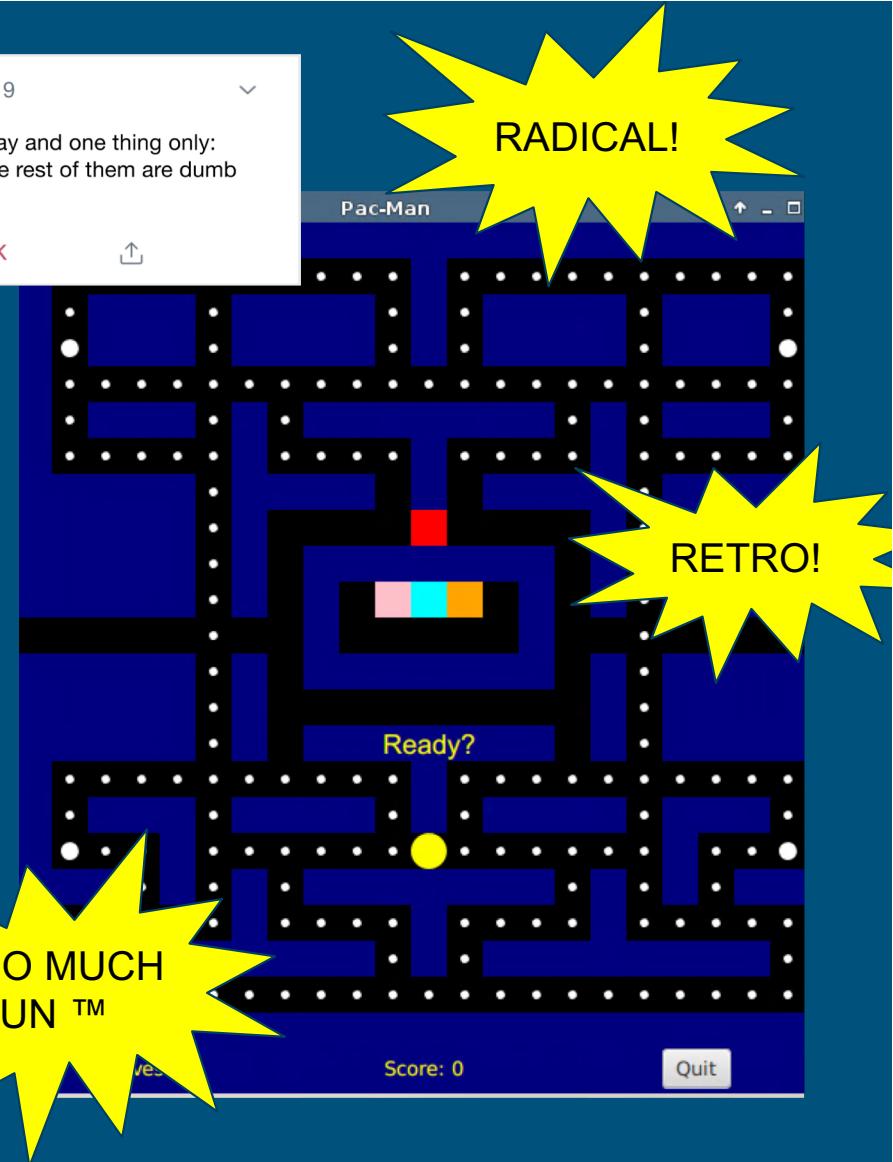
ok listen up young children i have one thing to say and one thing only:  
pacman is the best final project and that is all the rest of them are dumb  
thank you and have a nice day

82 4K 16.3K

andy mf van dam  @avd • November 19, 2019

if you don't choose pacman as your final project i will automatically fail  
you yah-YEET!!

191 16K 71.5K



Video

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## Top 5 Reasons to do Pacman (1/5)

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Have you been having trouble landing your jokes?

Do you want people to think that you're funny?

"Before doing Pacman I had never told a joke. After completing Pacman, people won't stop laughing at me " -cvogler



That's what she said.

2/3 Humor TAs did Pacman!



This day is bananas. B-A-N-A-N-A-S!



## Top 5 Reasons to do Pacman (2/5)

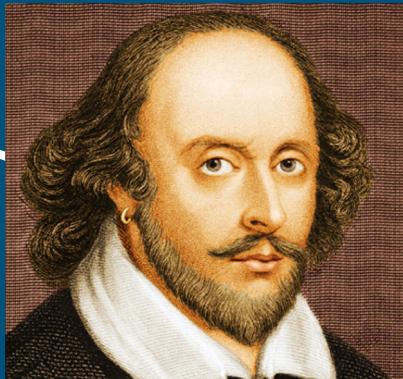


Dear Blueno

6 hrs ·

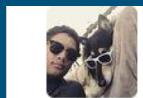
12525 - What do you do when your CS15 HTA accidentally throws their entire drink on you at a party and doesn't even realize as they walk by you soaking wet. Asking for a friend.

12



I h8 u

o(k)



noah 7:25 PM

tbh our top 5 reasons are the WEAKEST out of all the FPs

Even Shakespeare hates Othello.

"To be or not to be, that is the question. To do Othello or not to do Othello, that... that is not even a question."

(Hamlet, Act III, Scene I)

## Top 5 Reasons to do Pacman (3/5)

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Sketchy is all about pretty pictures  
so we took a relevant screenshot:

# Top 5 Reasons to do Pacman (3/5)

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**sketchy**

/'skeCHē/ ⓘ

*adjective*

1. not thorough or detailed.  
"the information they had was sketchy"  
*synonyms:* incomplete, patchy, fragmentary, cursory, perfunctory, scanty, vague, imprecise, imperfect; More
2. NORTH AMERICAN *informal*  
dishonest or disreputable.  
"once the story does come out, the fact that you tried to hide it will seem sketchy"

Google

taylor auten lucy reyes brown cs



All

Images

News

Maps

Videos

More

Tools

About 321,000 results (0.67 seconds)

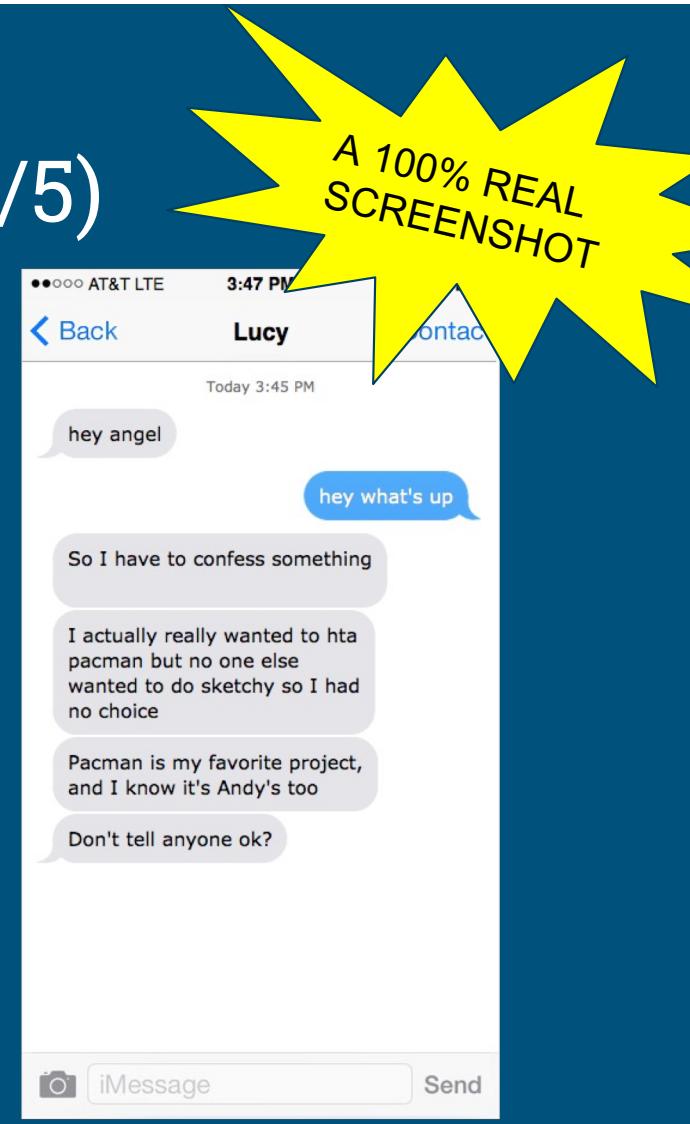
Did you mean: **sketchy**



## Top 5 Reasons to do Pacman (4/5)

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All of the Sketchy TAs actually have a deep passion for Pacman but were reassigned to Sketchy to meet TA quotas



# Top 5 Reasons to do Pacman (5/5)

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Indy? More like  
IntheCITallthetime



“i hAvE pRiOr cOdiNg eXpErleNcE”

# Demos

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# Evolution

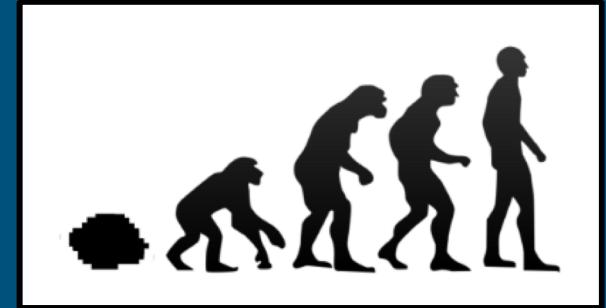


TAs: Noah, Mikey, Marlene, Madison,  
Rachel, Julie, Zoe, Zach, Will

# Some info

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- A brand new final project!
- ML based project where Birds learn how to play FlappyBird on their own
- Broken up into 3 parts:
  - Part 1: Code FlappyBird (it's like an easier DoodleJump)
  - Part 2: Make a population of birds that learn how to beat the game by themselves!
  - Part 3: Optimize your design
- Go through the super satisfying experience of watching your bird babies learn to fly hnnng



# Some More info

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- Since this project is brand new, we will be restricting the number of students that can take this project.
- You must fill out the form at the top of the handout by Wednesday (tomorrow, 11/20) at noon to be considered.
- You'll hear back Wednesday (tomorrow) night

# Generation 1

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# Generation 2

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# Generation 3

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# Generation 4

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# Generation 5

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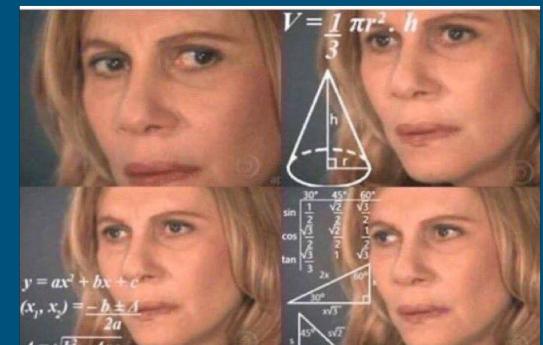
# Generation 6

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# Top 5 Reasons to do Evolution (1/5)

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- If you choose another FP it means you don't believe in evolution



**Charles Darwin** @dwn

· Nov 16

Anybody who doesn't do Evolution doesn't believe in evolution



also

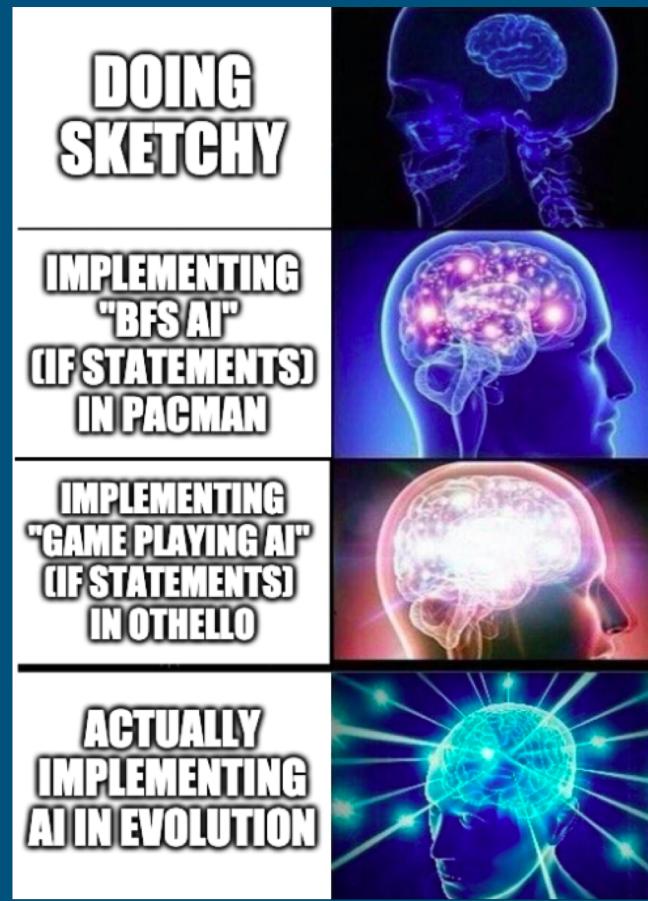


\*made in shitty microsoft paint sketchy

## Top 5 Reasons to do Evolution (2/5)

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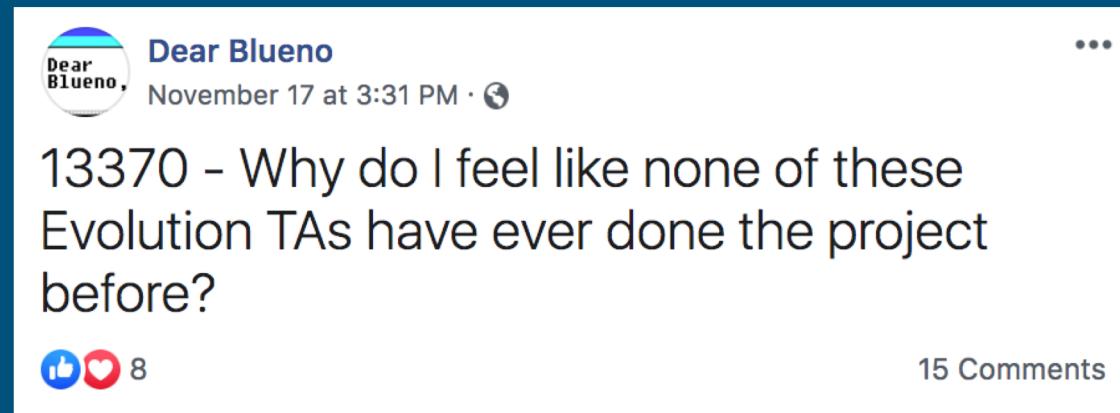
- It's the only project that actually has AI



# Top 5 Reasons to do Evolution (3/5)

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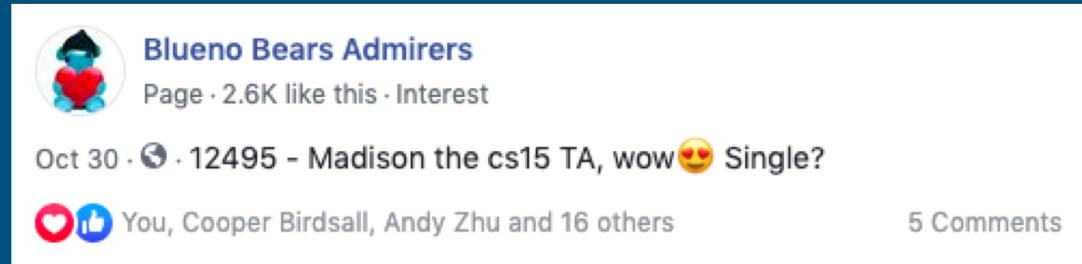
- Because no one has ever TA'd this project before, there will be ample opportunities to post about how bad we are on Dear Blueno



# Top 5 Reasons to do Evolution (4/5)

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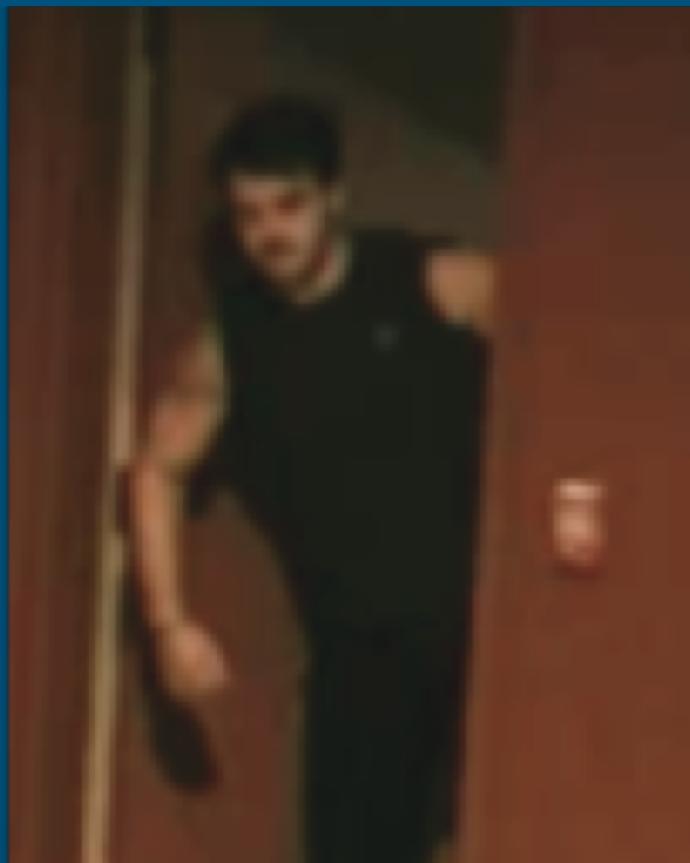
- Because we are the most attractive TAs, there will also be ample opportunities to post about how attractive we are on Blueno Bears Admirers



# Top 5 Reasons to do Evolution (5/5)

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- If you don't do evolution then you've gots to be garbage collected



# Demo

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VIDEO taylor pls

# Indy

TAs: Julie, Will, Zach, Zoe

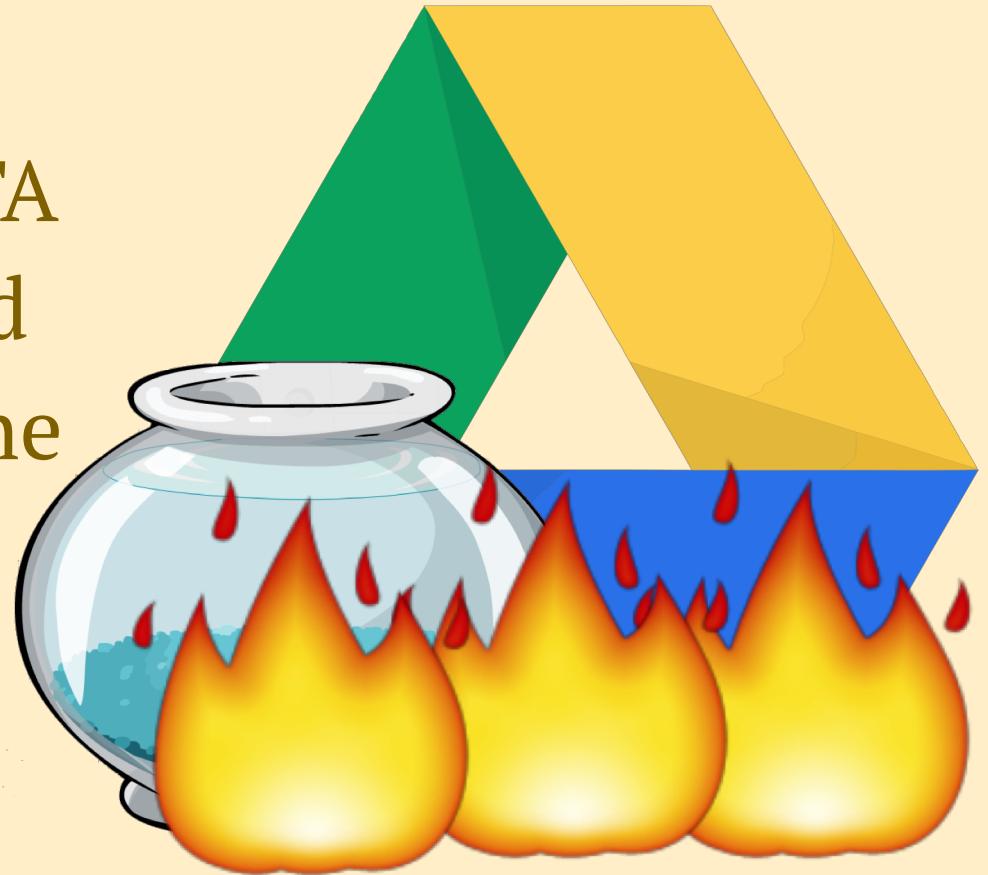


# Some info

- You design your own project!!
- Requirements:
  - Appropriate length (e.g. not LiteBrite)
  - Use a data structure
  - Use an algorithm of moderate complexity (at least as complicated as Tetris's line clearing)
  - Originality
- Possibilities are endless!

## Top 5 Reasons to do Indy (1/5)

You won't have to go to TA hours in the Fishbowl and we won't make you use the Google Form ever again.



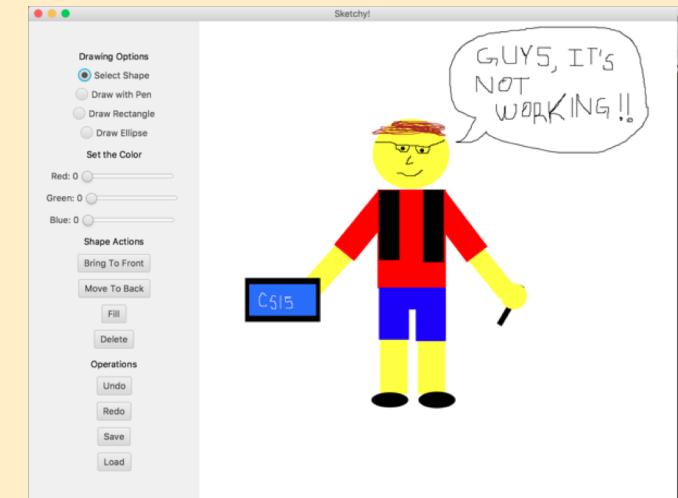
## Top 5 Reasons to do Indy (2/5)



1980



1883



Never made it to market

## Top 5 Reasons to do Indy (2/5)



## Top 5 Reasons to do Indy (3/5)

None of Pacman's reasons were even about Pacman, they were all just about the other FPs

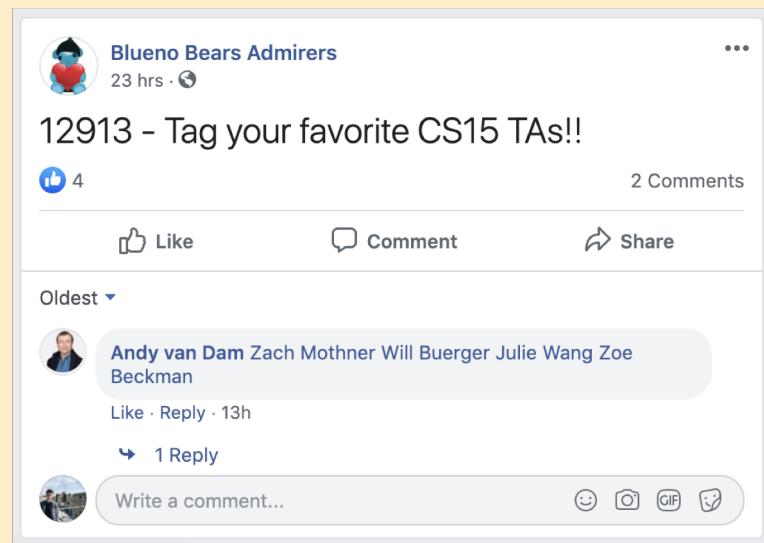


## Top 5 Reasons to do Indy (4/5)

Indy is only one  
letter away from  
Andy



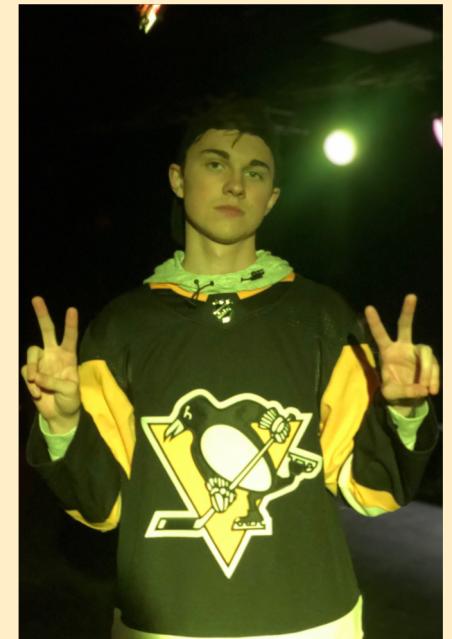
# Top 5 Reasons to do Indy (5/5)



## Top 5 Reasons to do Indy (6/5)

You get to interact with  
~~Cooper Birdsall~~ and  
~~Cooper Birdsall~~

i mean.. uhh.. zach and will



# Demos

# Very Important Indy Information

- If you’re interested in doing Indy, you should
  - Develop an initial plan for yours soon. If you have any questions you can email the Indy TAs at: [jwang73@cs.brown.edu](mailto:jwang73@cs.brown.edu), [wbuerger@cs.brown.edu](mailto:wbuerger@cs.brown.edu), [zbeckman@cs.brown.edu](mailto:zbeckman@cs.brown.edu) and [zmothner@cs.brown.edu](mailto:zmothner@cs.brown.edu)
  - Find a “backup” Final Project that you’ll do in case your project doesn’t get approved
- **Send us a project proposal by THIS THURSDAY MIDNIGHT**
- Keep in mind—Indy is a much larger time commitment than the other final projects
  - You’ll be responsible for creating your own program specs and design (other projects already have this planned out)
  - There’s a lot of freedom in this assignment—be comfortable with the lack of structure!
- It’s a lot of work, but a lot of fun!

# Announcements

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# Announcements

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- **Final Project Help Sessions during class time \*this Thursday\***
  - Locations were sent out in email yesterday
  - Make sure to read the handout thoroughly before coming—it'll save you lots of time down the road
- **Fill out the Final Project Declaration form by Saturday 11:59 pm**
  - You will only be able to sign up for hours for the project you pick, so think carefully!
- **Tetris late deadline is today at 11:59 pm**