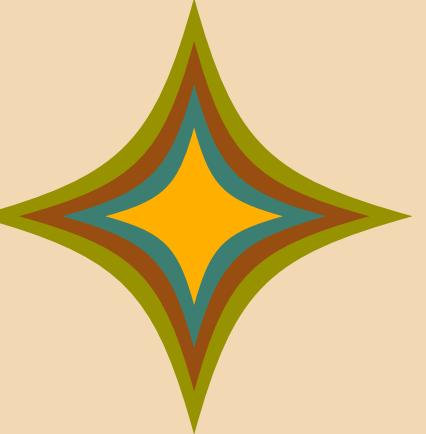
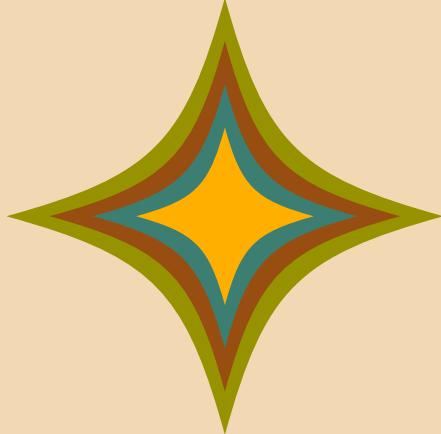


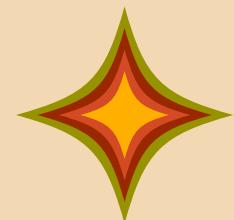
# THE GROOVY™ CS107E PROJECT LECTURE!

FALL

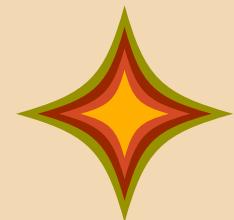
2024



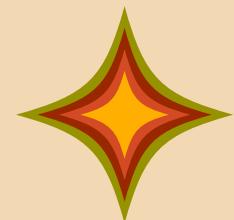
# HOW TO COME UP WITH A PROJECT



hobbies +  
passions



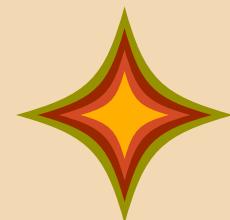
fixing daily  
annoyances



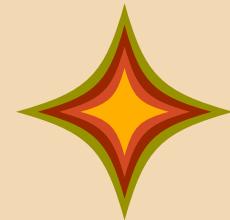
further os /  
assignment  
exploration



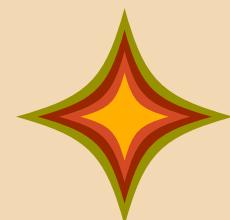
# HOW TO COME UP WITH A PROJECT



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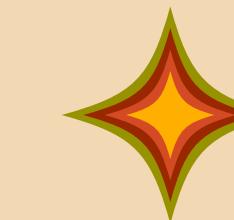
fixing daily  
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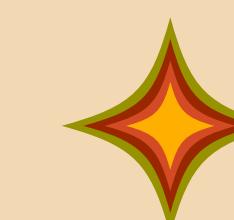
further os /  
assignment  
exploration



# HOW NOT TO COME UP WITH A PROJECT



my friend / some rando  
on the internet did this  
before so it will be easy!



"ok but lowkey, what's  
the min expectation for  
grade x"

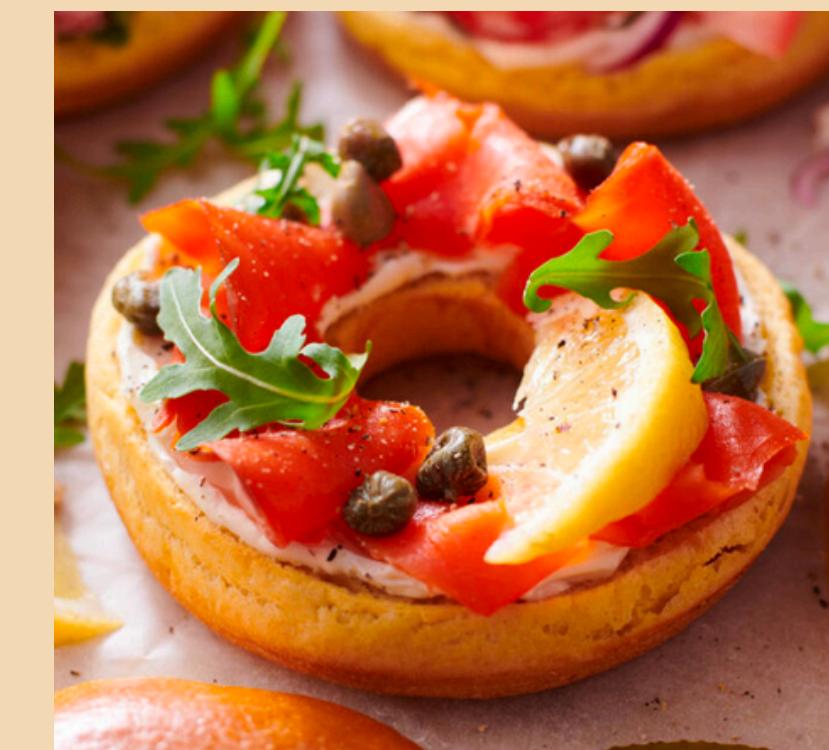


i'm like super into  
machine learning so  
that on a pi i guess

# BAGELS!







# EXECUTION VS. COMPLEXITY

in other words it is ok if your bagel  
is not rainbow

BUT PLAN SO YOU  
DO NOT PRESENT  
WITHOUT A BAGEL  
AT ALL

WHEN A USER TAKES A PHOTO,  
THE APP SHOULD CHECK WHETHER  
THEY'RE IN A NATIONAL PARK...

SURE, EASY GIS LOOKUP.  
GIMME A FEW HOURS.

...AND CHECK WHETHER  
THE PHOTO IS OF A BIRD.

I'LL NEED A RESEARCH  
TEAM AND FIVE YEARS.



# COMPLEXITY: WE ARE HERE TO HELP!

what is hard???

IN CS, IT CAN BE HARD TO EXPLAIN  
THE DIFFERENCE BETWEEN THE EASY  
AND THE VIRTUALLY IMPOSSIBLE.

WHEN A USER TAKES A PHOTO,  
THE APP SHOULD CHECK WHETHER  
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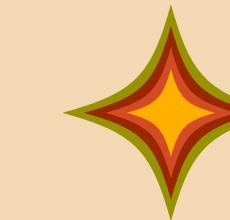
# COMPLEXITY: WE ARE HERE TO HELP!

## what can be hard???

MATH



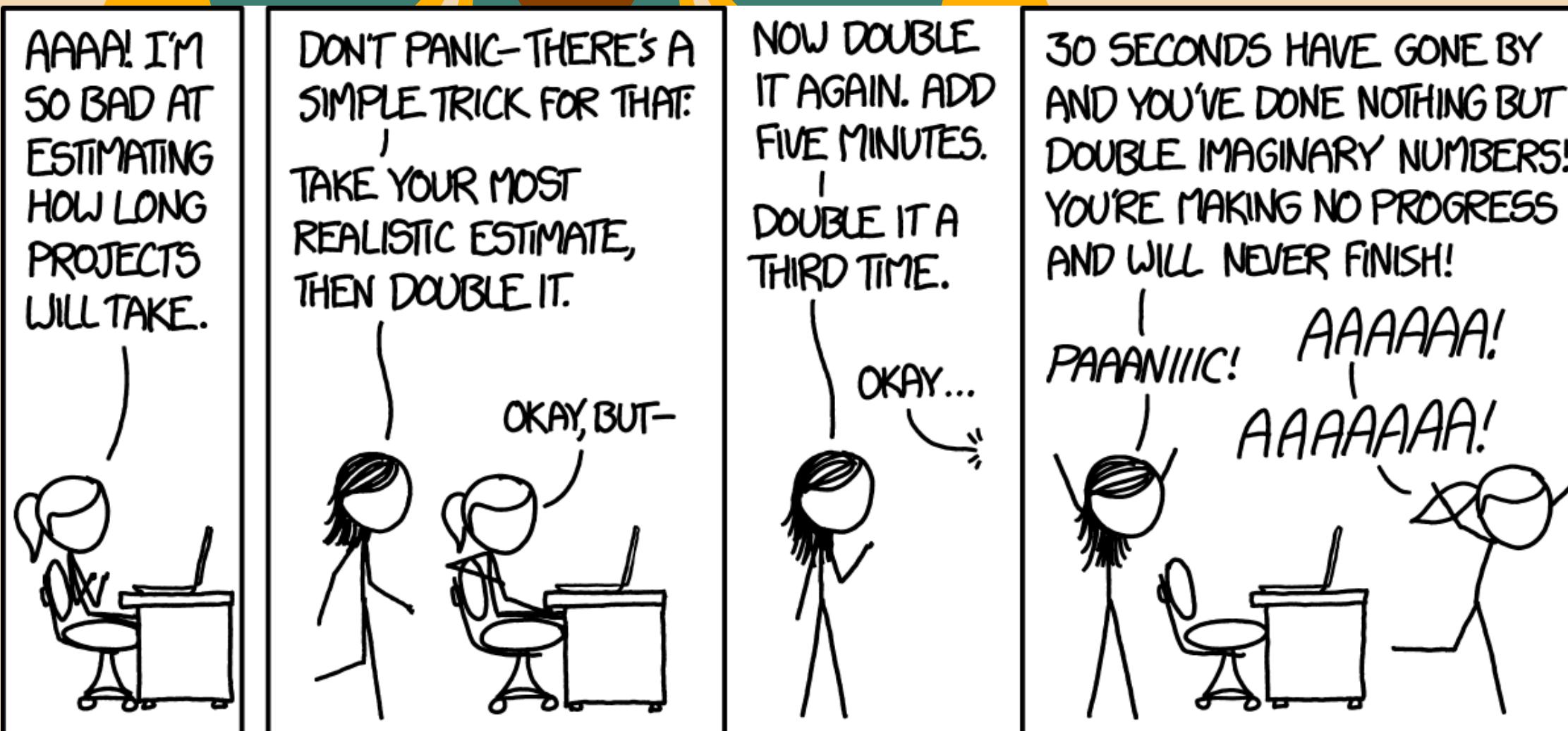
FANCY TIMING



MECHANICAL  
INTEGRATION

GPU stuff-->  
bad/no  
documentation is  
rude and hard

# TIME... IS HARD



```
void print_cold_hard_truth(void) {  
    printf("being good at something  
    does not make you good at  
    knowing  
    how long something will take");  
  
    // :(  
}
```

AS A PROJECT WEARS ON, STANDARDS FOR SUCCESS SLIP LOWER AND LOWER.

0 HOURS



6 HOURS



10 HOURS

WELL, THE DESKTOP'S A LOST CAUSE, BUT I THINK I CAN FIX THE PROBLEMS THE LAPTOP'S DEVELOPED.



24 HOURS

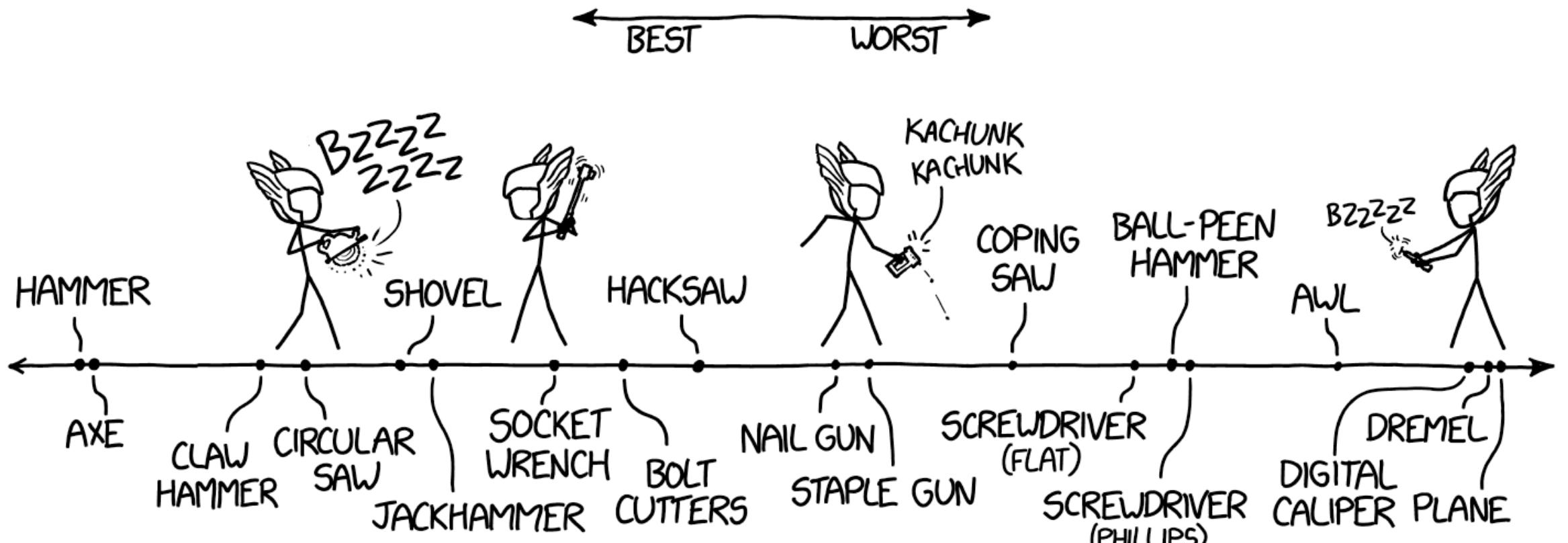
IF WE'RE LUCKY, THE SHARKS WILL STAY AWAY UNTIL WE REACH SHALLOW WATER.

IF WE MAKE IT BACK ALIVE, YOU'RE NEVER UPGRADING ANYTHING AGAIN.

# IF YOUR PROJECT SHOULD BE BUILT WITH AN OS

## MAYBE DON'T TRY TO BUILD IT WITHOUT ONE

HAND TOOLS THOR COULD HAVE ENDED UP WITH



unless it's building an os... haha jk... unless

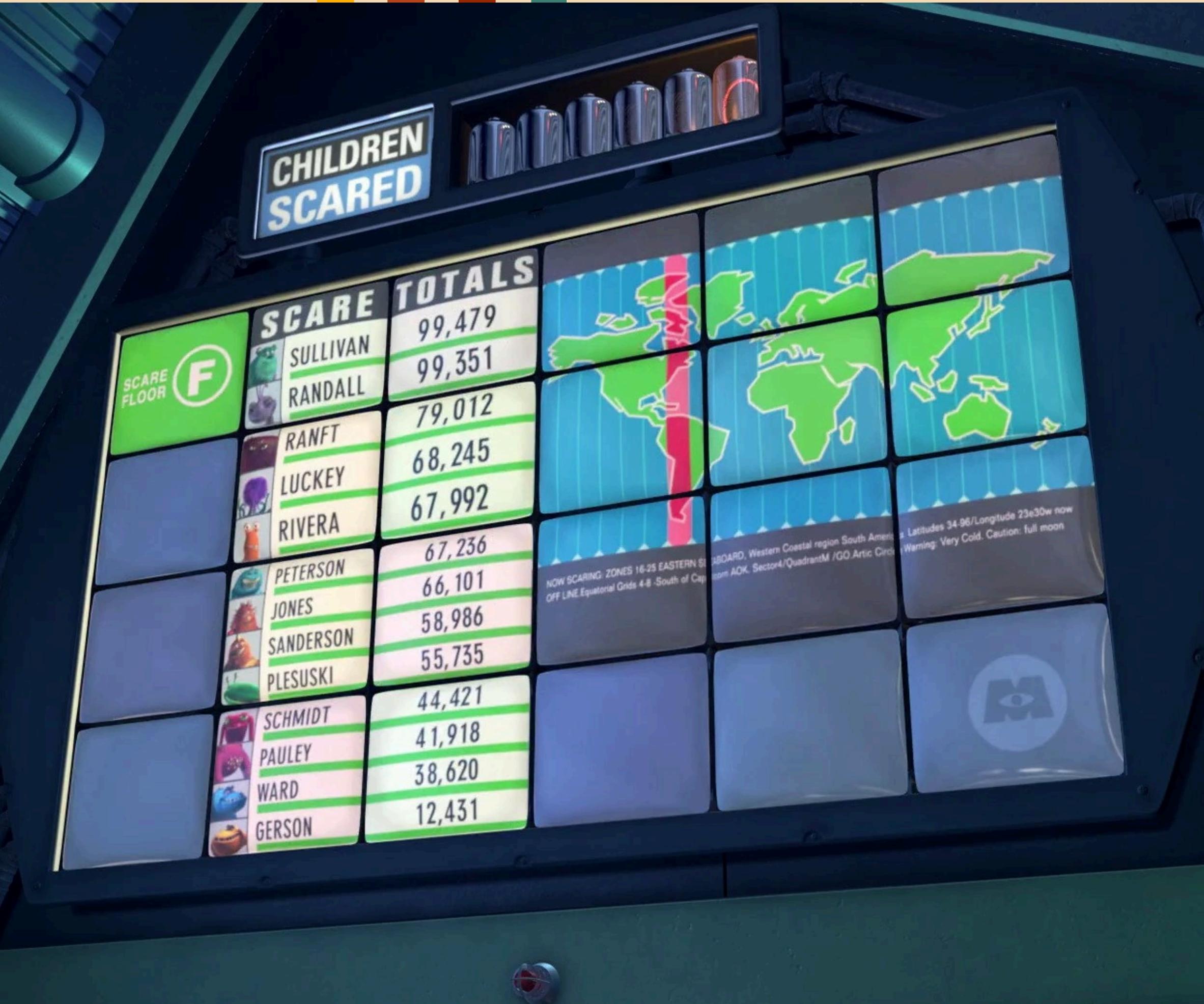


# BE LIKE SCULLY & MIKE

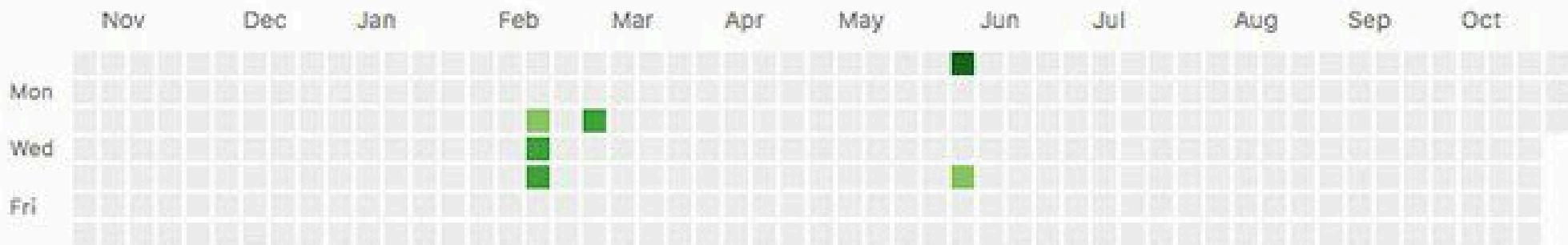
each person needs to have their own discrete responsibilities: how can both people always be making progress?



**BE LIKE  
SCULLY & MIKE:  
DISCRETE JOBS  
= HIGHER SCARE  
TOTAL = 107E  
SUCCESS**



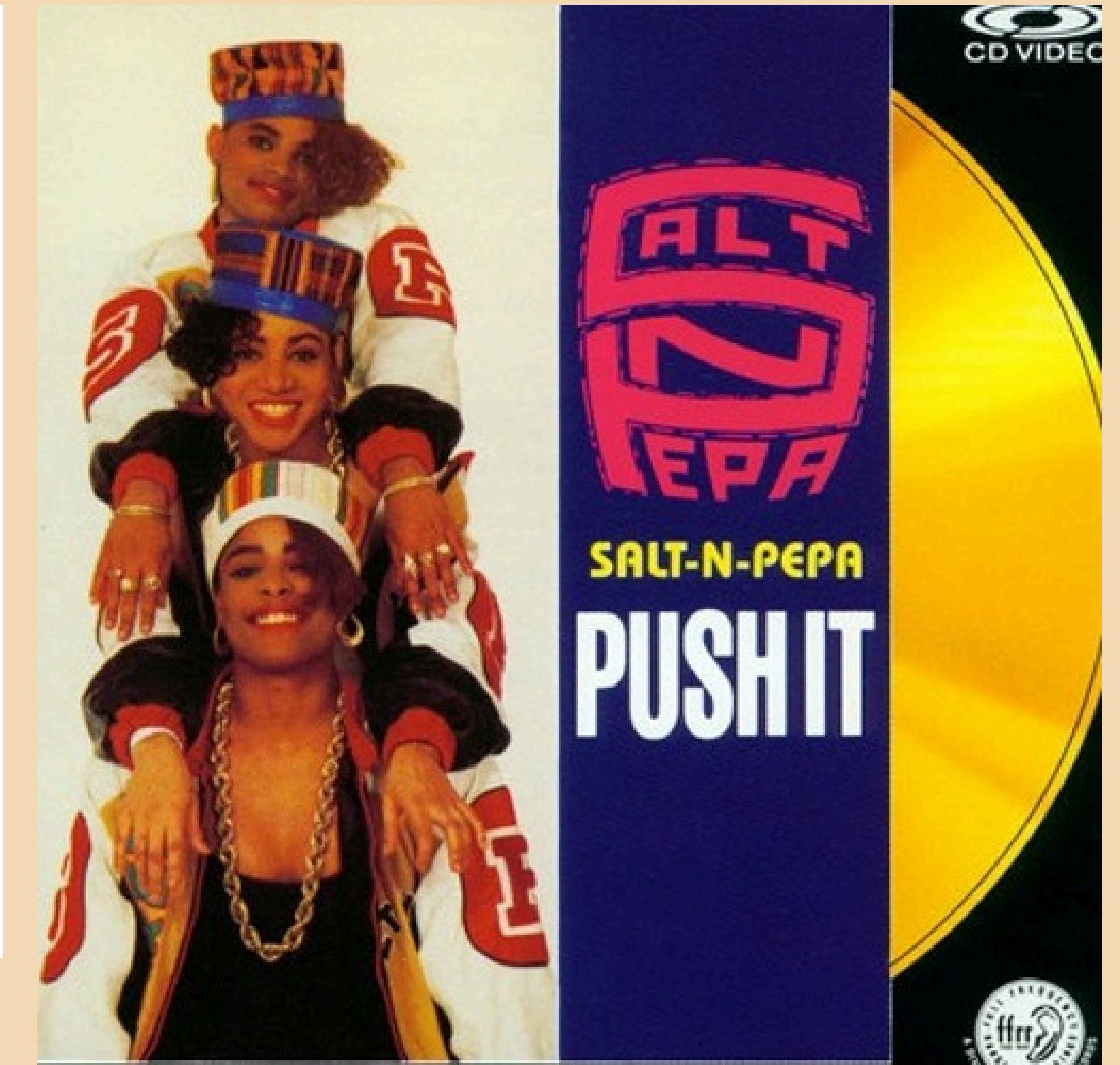
Me



The guy she tells me not to worry about



# OOH BABY BABY



# WHY DOES GIT EXIST?

# HOW MUCH TIME DO YOU WANT TO SPEND?



IS IT FINALS  
WEEK AND  
PRESENTATIONS  
ALREADY?



GREAT  
PROJECT



FANTASTIC  
PROJECT



I HAVE NO LIFE BEYOND  
THIS CLASS. I SLEEP IN  
107E PAJAMAS. I DREAM  
ONLY IN C. MY LIFE IS ON  
HOLD FOR MY PI <3

# MISC ALSO

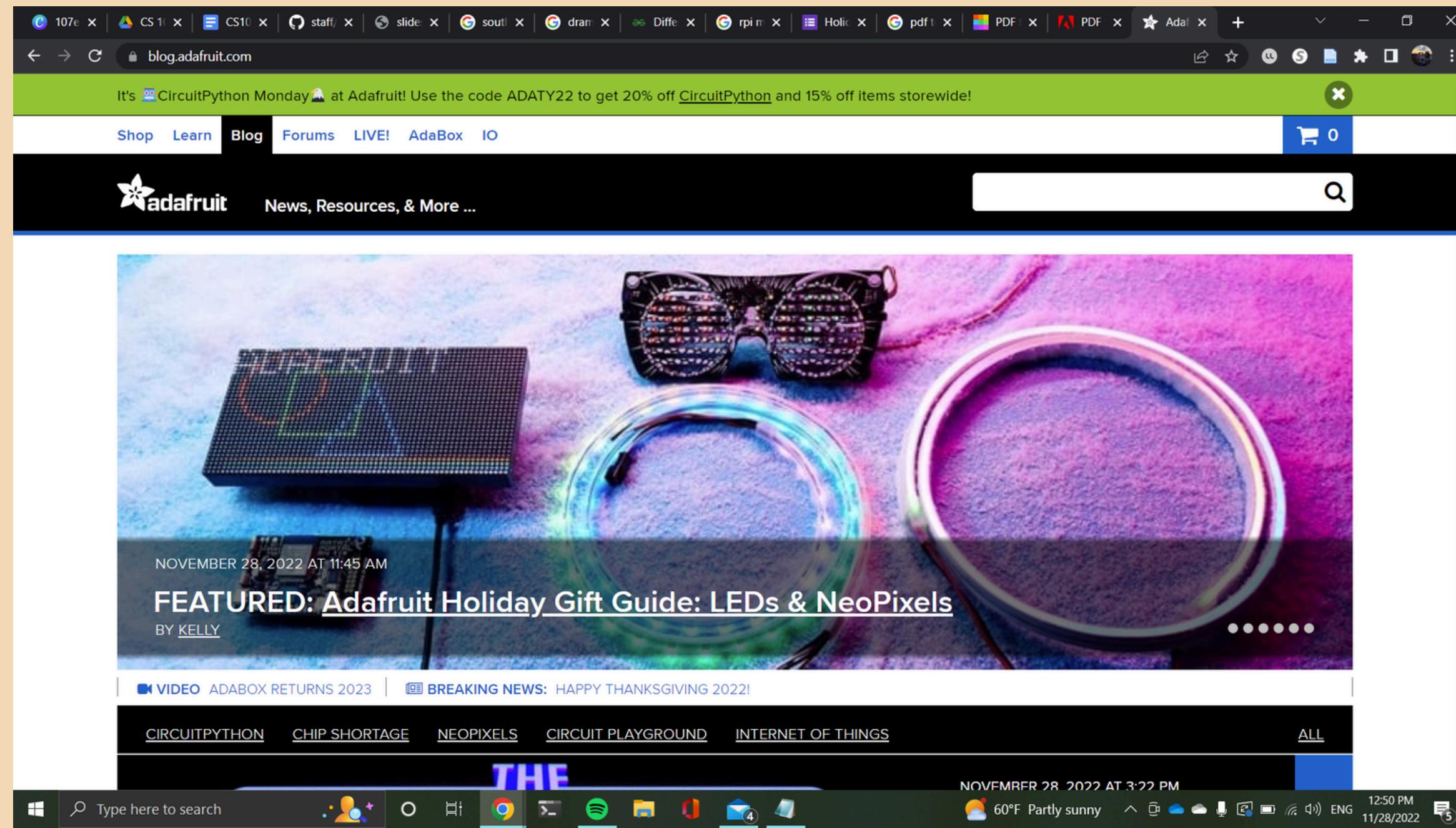


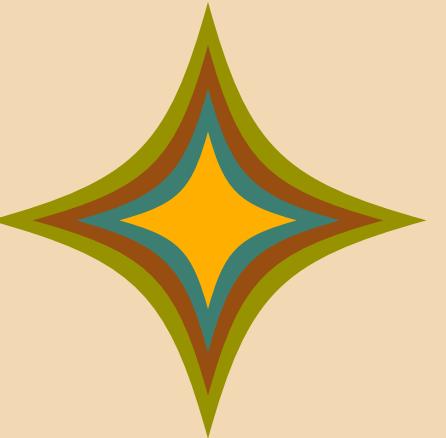
- lab64 resources are available! laser cutter, 3d printers, etc

- build off existing codebase
- ask for help with Makefiles
- code off the internet is a project in and of itself

# SOME FAVORITE RESOURCES

- adafruit
- digikey
- sparkfun
- hackaday
- make magazine





QUESTIONS??

