

# Let's Get Started

ASTR 260L - Week 1

Jessica Schonhut-Stasik

# Who Am I?

- Jessica Schonhut-Stasik, originally from London, UK.
- BSc from University of Hertfordshire/The Open University
- Masters' Degree in Astronomy from UH Hawai'i (Manoa)
- Currently a graduate student at Vanderbilt University
- Fellow of the Frist Center for Autism and Innovation
- Telescope System Specialist at United Kingdom Infrared Telescope (Maunakea)
- Your lab instructor (aren't you lucky?!)

I love animals and still sing  
along to Hamilton almost daily



This is Nordle!

```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```

# What Do I Do?



Single Star



Binary System



Multiple System

SINGLE STARS ARE RARE.

I find hidden stars!

```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```

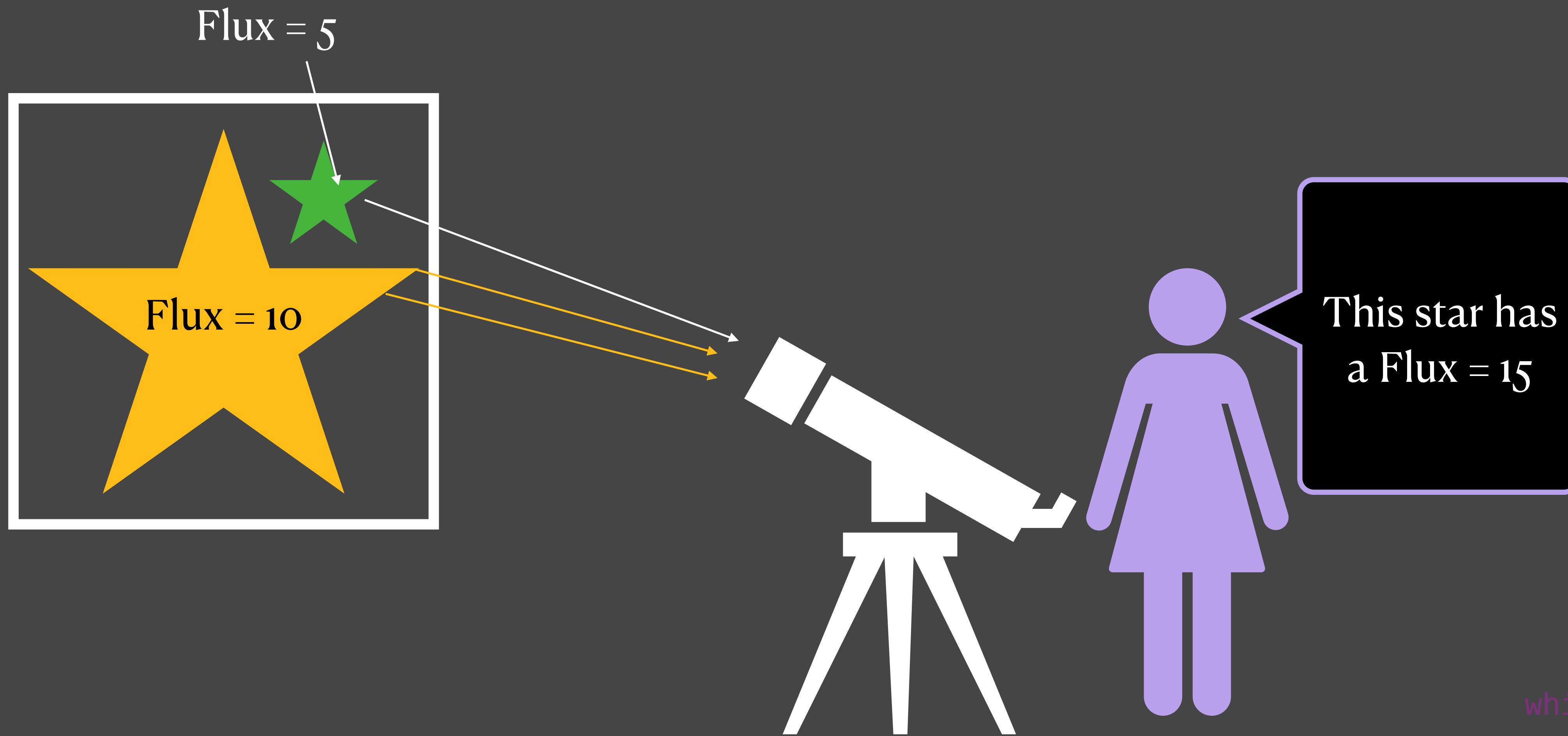
# What Do I Do?



I find hidden stars!

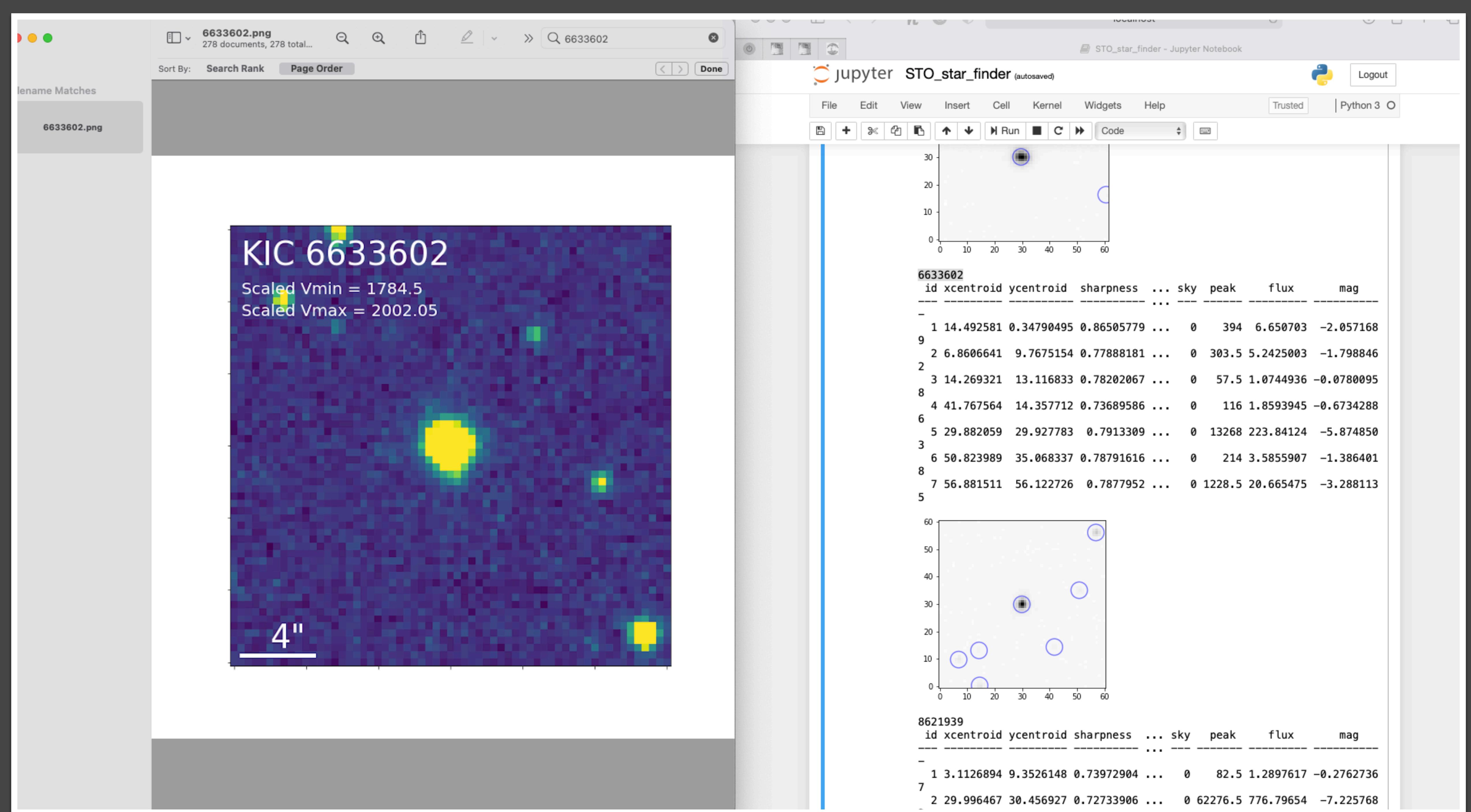
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    eat();  
    sleep();  
    code();  
    repeat();  
}
```

# What Do I Do?



I find hidden stars!

```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```



# Lab Structure

Meet once a week on Zoom

**Meeting ID:** 895 7284 1267

**Passcode:** y6f1mn

Wednesdays 3 - 5:45pm

First hour or so will be teaching.  
Workshop for the remaining 1hr 45 minutes.

## Priorities in workshop:

- (1) Class tasks
- (2) Weekly assignment (from Mike)

```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```

# TALK TO ME!!

**Office Hours:** Meeting ID: 862 9208 1346

Passcode: mx32gu

Tuesday 4 - 5pm (negotiable!)

**Email:** jessica.s.stasik@vanderbilt.edu (7am - 9pm)

**Slack**

```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```

# Purpose of Lab

- Companion lab to Computation Physics and Astronomy Lecture
- To help introduce to you Python
- To provide you with a solid coding base
- To teach you basic modules, functions and processes that will make your python life easier

```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```

# Marking Scheme

Grade Boundaries:

A >= 180 (90%)

B >= 160 (80%)

C >= 140 (70%)

D >= 120 (60%)

etc.

**Total points available = 200**

Class Tasks = 150 max

In Class Quizzed = 50 max

There will be more points ‘available’  
but you only need 200 for an ‘A’

```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```

# What I Wish Someone Had Told Me

1. Stack Overflow will become your best friend – but aimless copy and paste doesn't get you anywhere.
2. Don't Panic! If you get stuck, make a note of every step you take so you don't end up in a panic loop.
3. Get a rubber duck!



```
while (alive) {  
    eat();  
    sleep();  
    code();  
    repeat();  
}
```



Slack

JOIN HERE

[https://join.slack.com/t/computationalastro/shared\\_invite/zt-klsrcd2r-RQSO2cqwF10v\\_Xq84vQt~w](https://join.slack.com/t/computationalastro/shared_invite/zt-klsrcd2r-RQSO2cqwF10v_Xq84vQt~w)

# Slack - What is it?

Online messaging and collaboration tool

**Workspace** = A space on Slack that contains all the channels for a particular organization

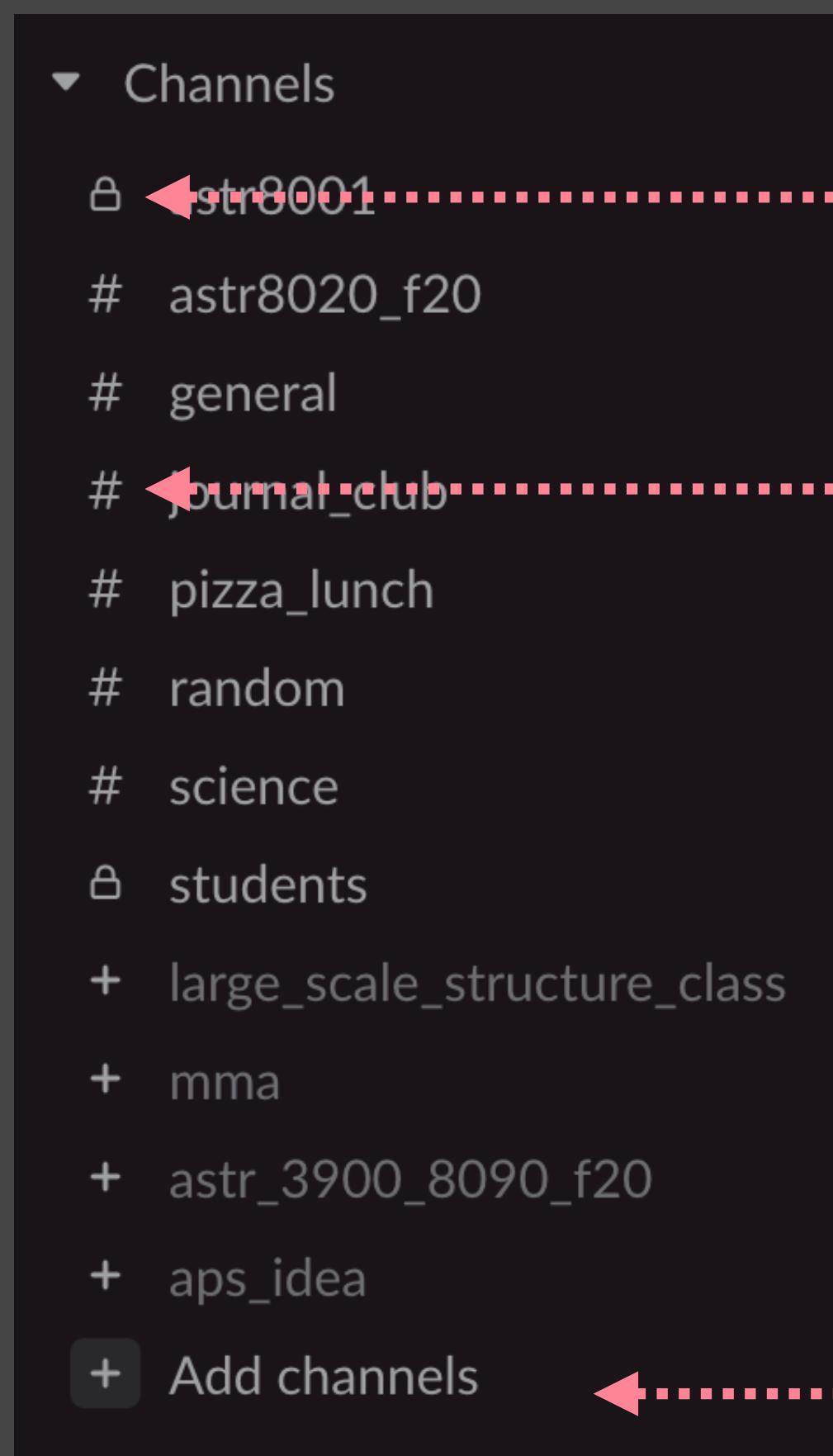


```
while (alive) {  
    eat();  
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    repeat();  
}
```

# Slack - What is it?

Online messaging and collaboration tool

**Channel** = A particular conversation within the workspace



**A private channel that I'm in**

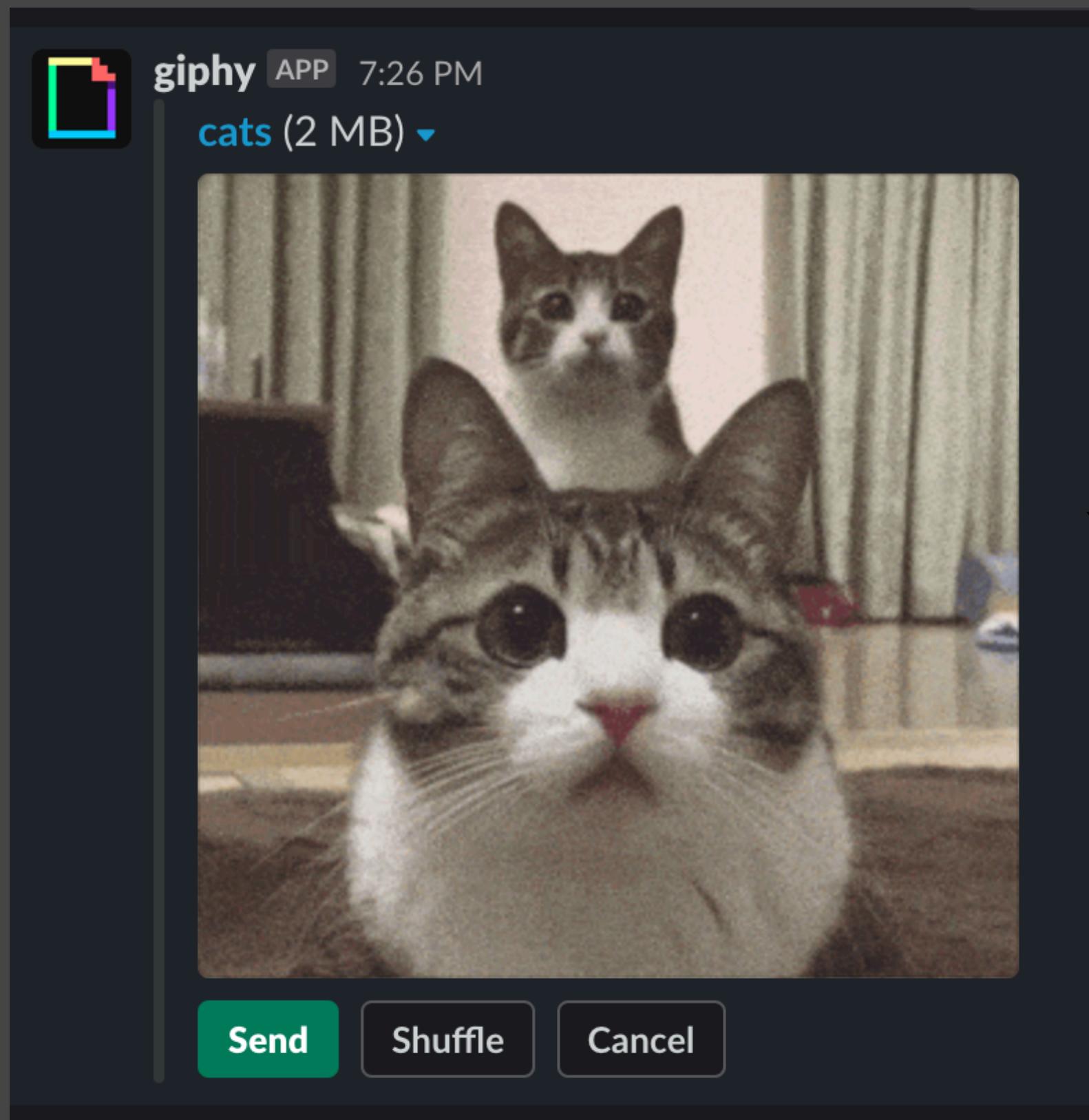
**A public channel that I'm in**

Public channels I may want to join

To create a channel

You can't see private channels unless you are invited to them, but you can search for, and join, public channels if you know the name of them

# Slack Hacks



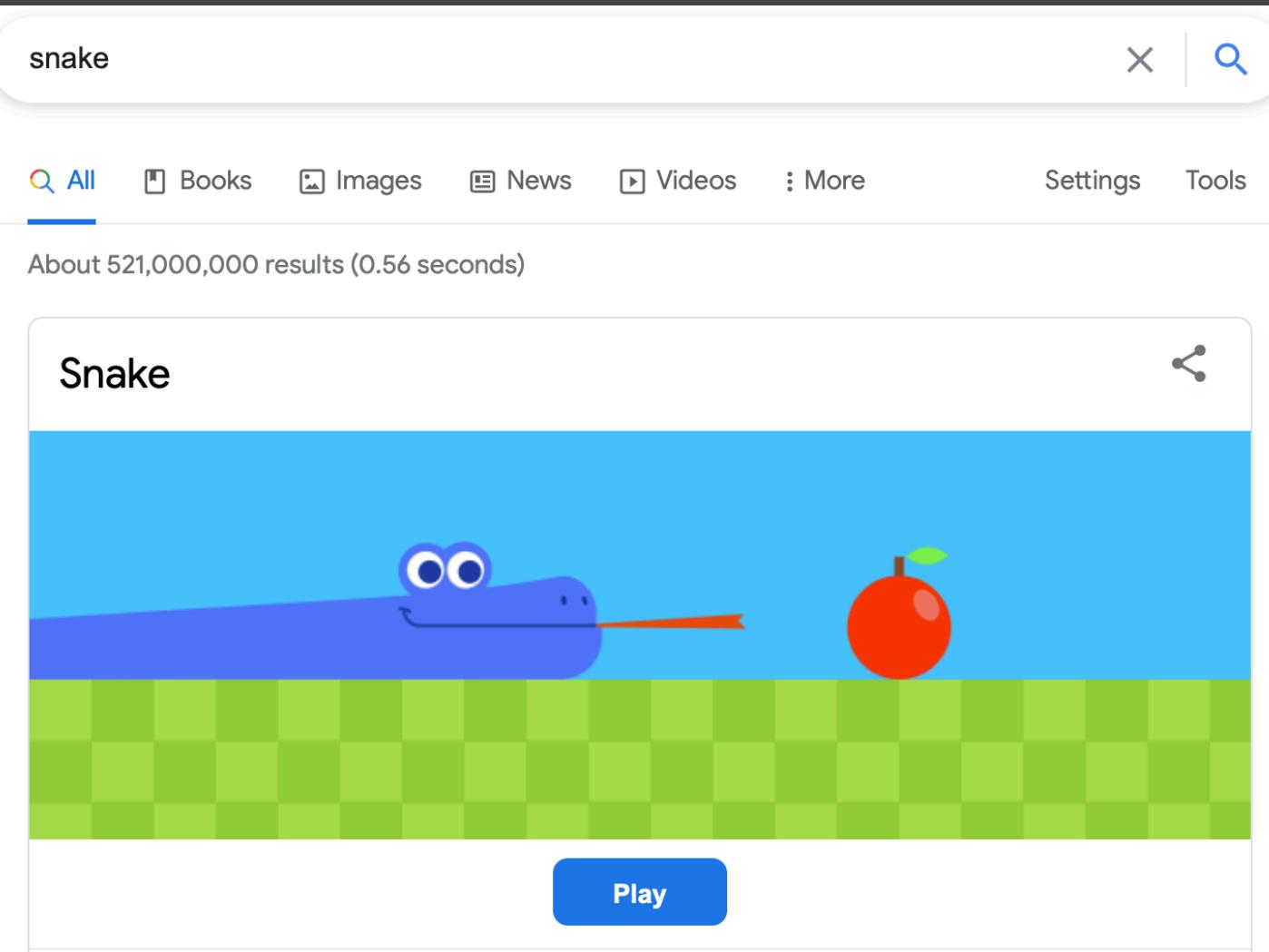
Slack is an important industry tool!

What better way to learn than to have fun with it!

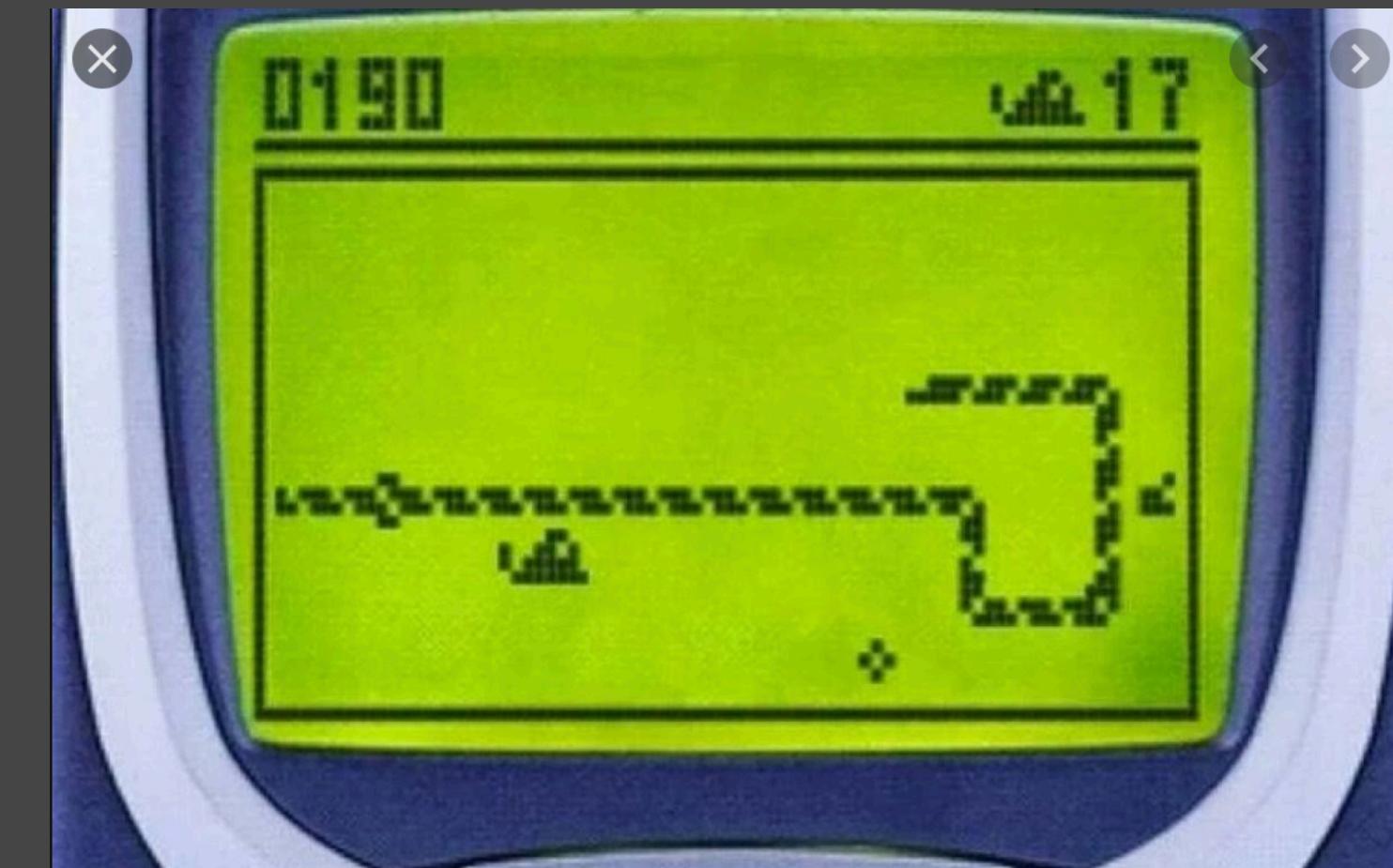
Link to Hacks in the resources channel.

If you want a specific feature added, lmk!

**I have already added the giphy hack.**



# Python



The code is deciphered line-by-line, this is different to a compiled language like C++.

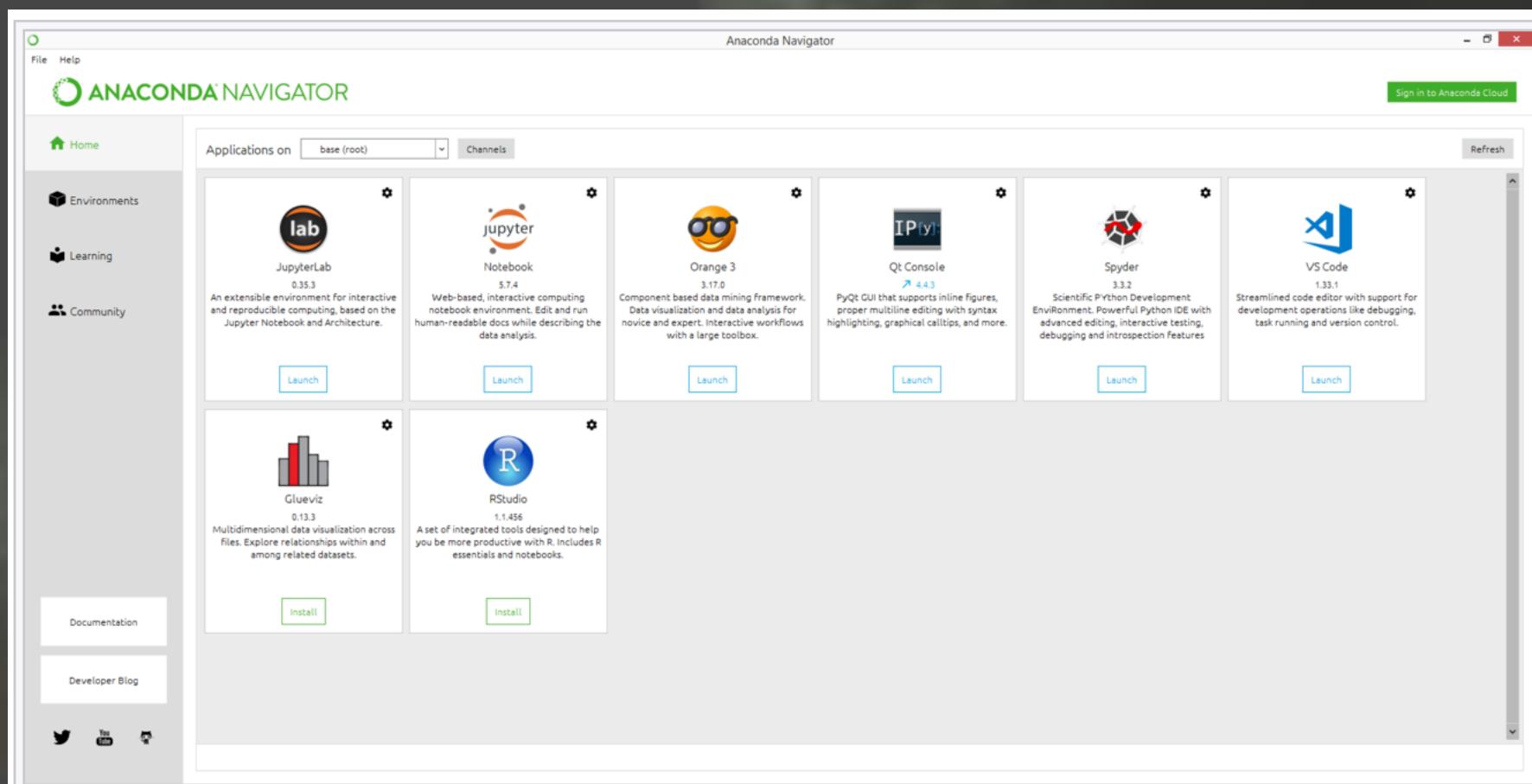
Python is an interpreted, high-level and general-purpose programming language used worldwide. Python's design philosophy emphasizes code readability with its notable use of significant whitespace. (Wiki)

This is literally the space between text.  
Python uses this to define functions etc.  
One must be careful about how the organize whitespace!

# Python

**Anaconda** = A python distribution package  
Comes with many modules and many options etc.

**We are going to use Anaconda as the base for our Python programming, that way we all know we have the same packages etc!**



Anaconda also has a navigator that comes with other tools, like notebook! These are awesome for testing code, but not for this class please!

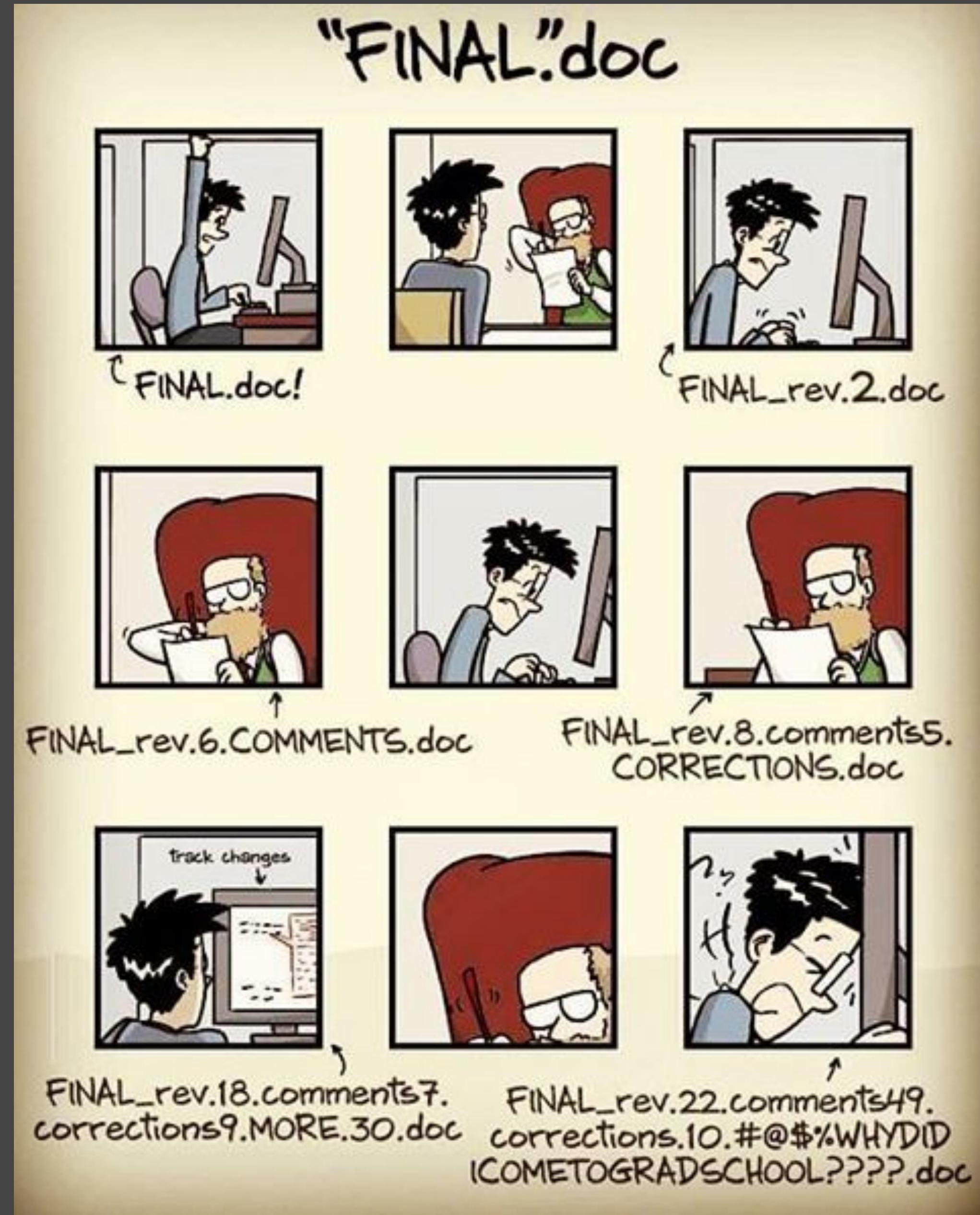
# CommandLine

We will be doing all our work using the command line and your favorite text editor.

Every type of computer (Mac/Windows/Linux) has a command line, it's the thing that looks cool in the movies!



On Mac this is the program terminal. For the sake of my sanity we will all load python etc. using a version of this.

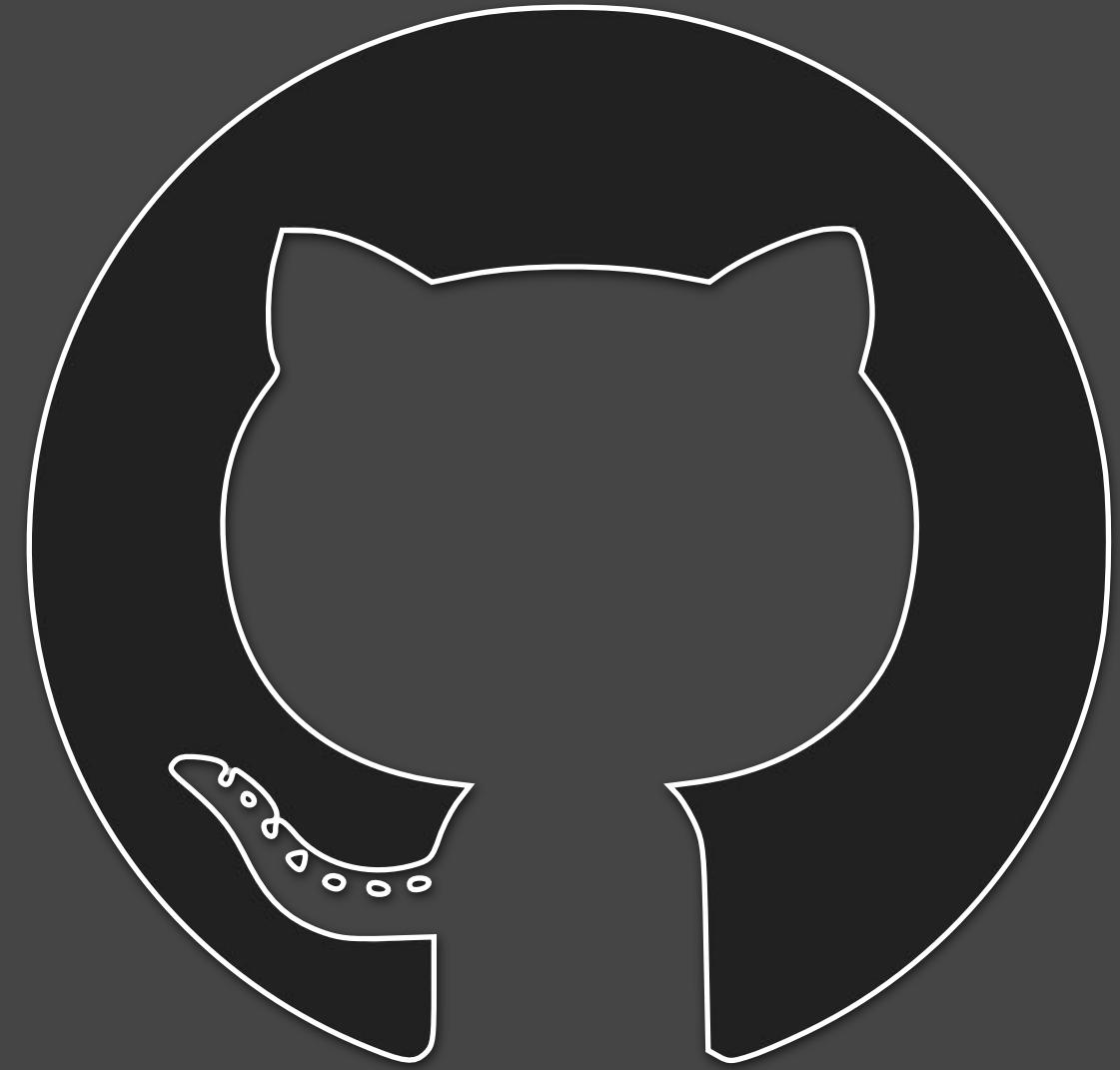


# GIT

- Git is the industry standard version control software.
- Allows you to update code, 'pushing' and 'pulling' different versions.
- Prevents `final_final_version23.py`

# GIT/Repo Basics

- When you create a directory (folder) on your computer, this can become a git repo
- This repo can then be ‘pushed’ and ‘pulled’ to an external version control software, i.e. git or GitHub.
- Others can also ‘push’ and ‘pull’ repos that they have access too, allowing collaboration.
- You can ‘push’ and ‘pull’ to your own repo through the command line.



# Git Classroom

- Run through Github.
- Github is a web-based version of Git.
- Git Classroom is run through Github.
- You will receive an assignment link to Git Classroom and can go from there.

# Class Tasks

## Slack Tasks

1. Load the workspace and go to the #lab\_1\_test channel
2. When you get there, post 'Hello' in a language of your choice (extra points for Elvish!)
3. Now upload your favorite meme or cat/dog picture to the channel and share it
4. Tag me and ask a question (about anything honestly, Hamilton... my animals...)

# Class Tasks

## Python/AAnaconda Tasks

1. Open the command line on your computer
  1. Mac = Terminal
  2. Windows = WindowsPowershell
2. Follow the instructions on this page → <https://docs.anaconda.com/anaconda/install/>
3. To verify the install once it is complete use command: conda --version
4. Check the version of Python in your conda environment: python --version

# Class Tasks

## Git Tasks

1. <https://classroom.github.com/a/QaMJUfyu>
2. Accept assignment
3. Open text file and insert text
4. Save file and submit assignment

# FEEDBACK!

Bobo - August - 8 weeks



Feedback  
Comments  
Concerns  
Questions

Makes me a better  
teacher!

Bobo - Now - 7 months

