# Welcome to the Wonderful World of GitHub

**UGIC 2016**

Get started by downloading these applications
- desktop.github.com
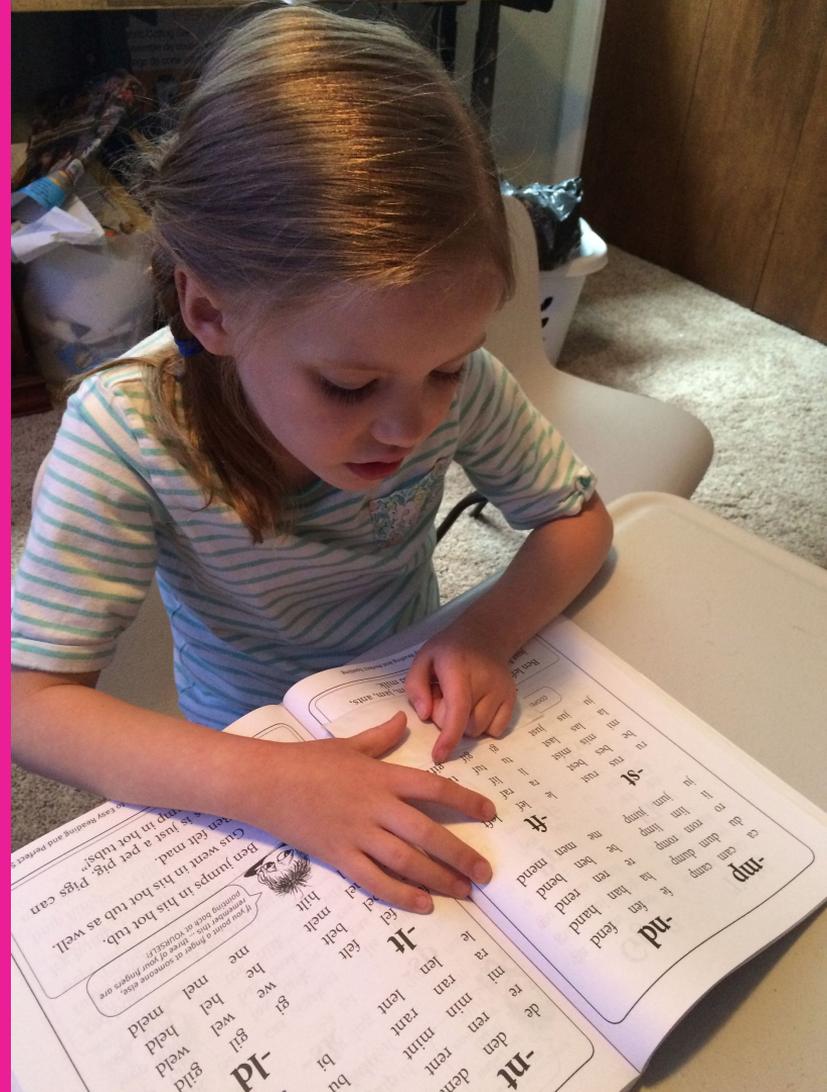- github.com/jlord/git-it-electron/releases

Slides: goo.gl/7MkWiO (zero)

# Required Software

- GitHub Desktop (desktop.github.com)
- Git-it (github.com/jlord/git-it-electron/releases)
- Text Editor (Atom, Sublime, Notepad, etc…)

# Git-what?

Git is hard, but you can do it!

# Git

## Version Control System

## From the source code's readme:

GIT - the stupid content tracker

"git" can mean anything, depending on your mood.

- random three-letter combination that is pronounceable, and not actually used by any common UNIX command.  The fact that it is a mispronounciation of "get" may or may not be relevant.

- stupid. contemptible and despicable. simple. Take your pick from the dictionary of slang.

- "global information tracker": you're in a good mood, and it actually works for you. Angels sing, and a light suddenly fills the room.

- [one more definition that has been redacted]

🖶  100% ▾

Total: 2 edits   ∧  ∨

Put Git-it & GitHub Desktop downloads on a few flash drives to help with downloading it.
Start it downloading first thing then start into intro slides
Post word definition pages on board as we go through - poster putty
- Repository: A folder within which changes are tracked
- Commit: Package of work
- Push: Send commits to a remote database
- Pull: Pull commits from a remote database
- Remote: A git repository on a different computer/server
- Fork: A linked copy of a repository residing under a different account
- Clone: Copy a remote repository onto your computer
- Branch: Do work without affecting others/master
- Merge: Move commits from one branch to another
- Collaborator: Someone with write access to a repo
- Contributor: Someone who has made contributions to a repo via a fork
Get links for advanced learning if people get bored
- https://guides.github.com/
[] Check for attribution for git-it & training kit

# GitHub

Git in the cloud + more goodies

# Why should I care?

- [github.com/agrc/agrc.python](github.com/agrc/agrc.python)
- [github.com/arcpy/sample-gp-tools](github.com/arcpy/sample-gp-tools)
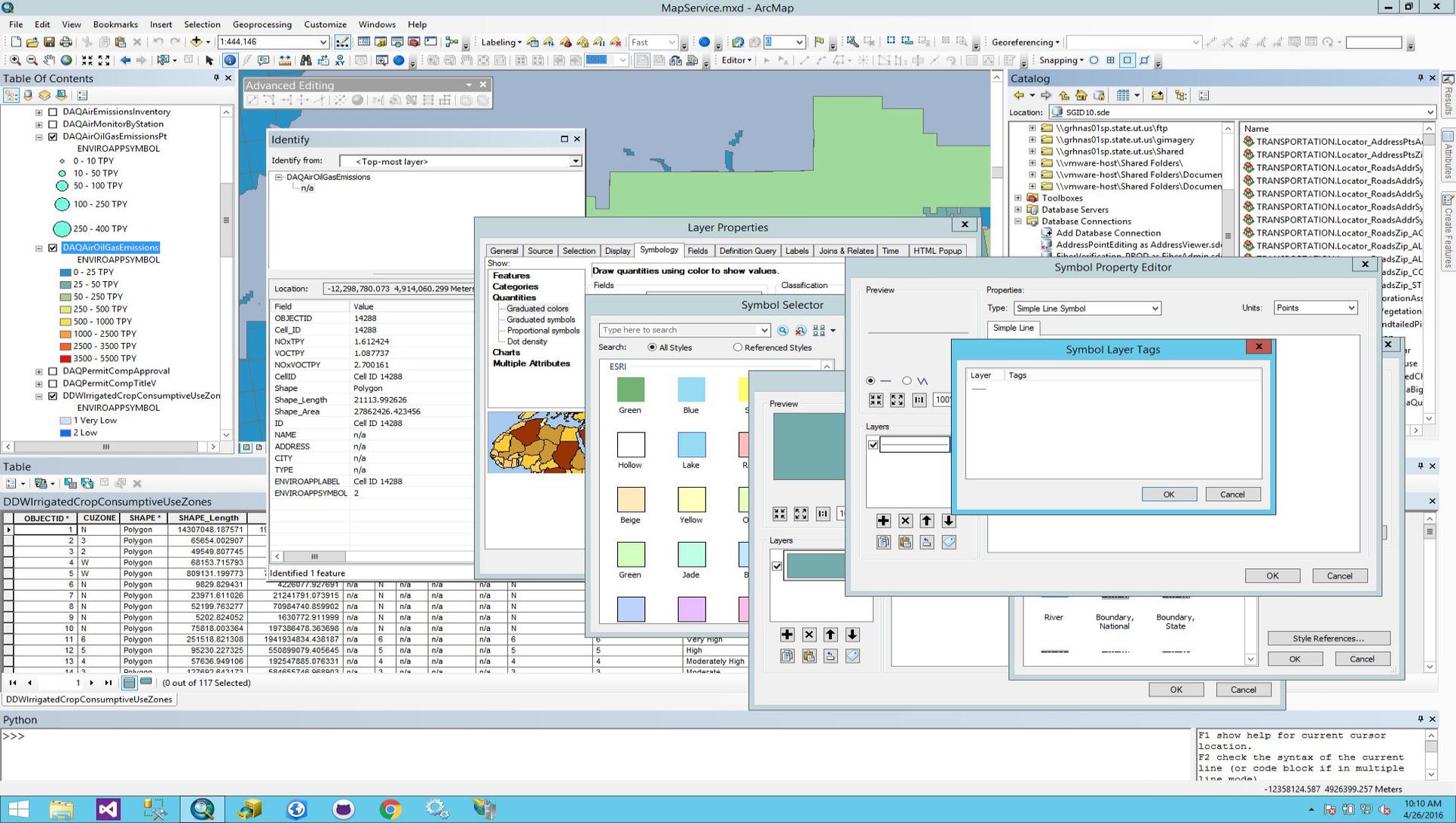- [github.com/agrc](github.com/agrc)

# Collaboration

# Git-it

An app that teaches you how to use Git and GitHub on the **command line**.

github.com/jlord/git-it-electron

```
~/Documents/Projects $ ▯
```

2 Uncommitted Changes | History

Pull Request

master

Compare

Sync

master

2 Changes

_config.yml

_config.yml

_posts/2016-03-28-c...cts-to-type-script.md

```
@@ -15,7 +15,7 @@ analytics:
15   15        google:
16   16            tracking_id: 'UA-11849964-41'
17   17    sass:
18      -      style: compressed
     18   +      style: nested
19   19    markdown: kramdown
20   20    kramdown:
21   21        input: GFM
```

Summary

Description

Commit to master

# Get Git

- Install and configure Git

Tip:
Use the terminal that opens when you press "\"
(Windows) or cmd-t (OSX) in GitHub Desktop

# Repository

A folder within which changes are tracked

# Repository

- **Create a new repository on your computer**

```
Tip (Windows Only):
Right-click on terminal and select paste to paste. Ctrl-v
doesn't work.
OSX: Cmd-v should work as expected.
```

# Commit

Noun: A collection of changes

Verb: Record changes to a repository

# Commit To It
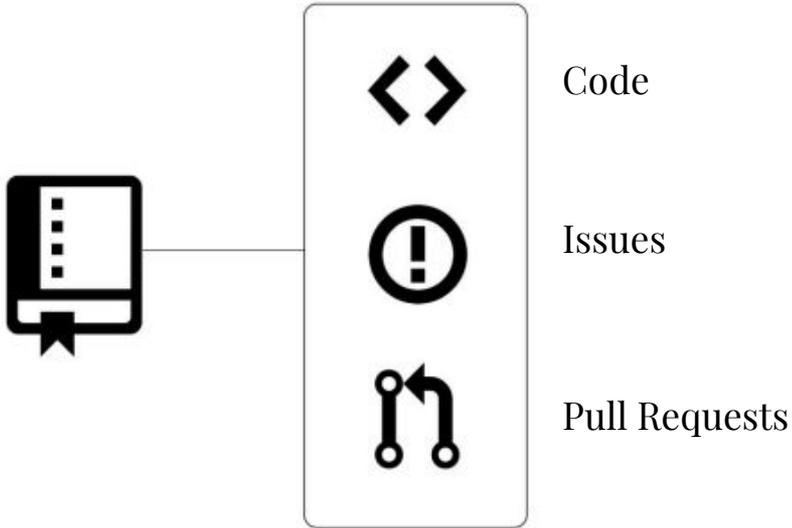
- Add a new file and commit the changes

Tip:
Quickly create a new file using the command line this:
$ touch NewFile.txt
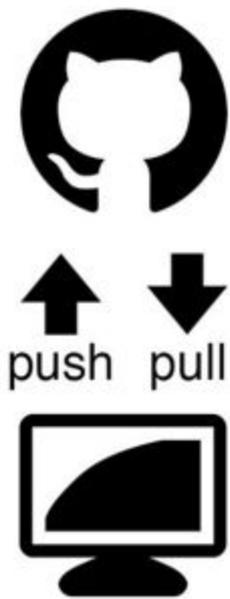
**GitHub**

Code

Issues

Pull Requests

- Wiki
- Graphs/Pulse
- README
- Collaborators & Contributors
- Continuous Integration Systems
- Packages management integrations (e.g. bower/pip/npm)
- Free for open source projects

track    build and test    deploy

# GitHubbin

- Create a GitHub account
- Add your username to git config

push  pull

# Push

Send commits to a remote repository

# Pull
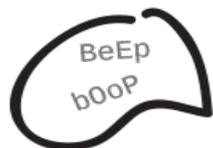
Pull commits from a remote repository

# Remote

A git repository on a different computer/server
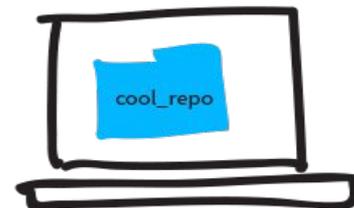
# REMOTE

Repositories live
on a GitHub **server**.

BeEp
bOoP

Push

Push

Pull

Pull

cool_repo

cool_repo

**Browser** lets you
access repository
and send changes
back to the server.
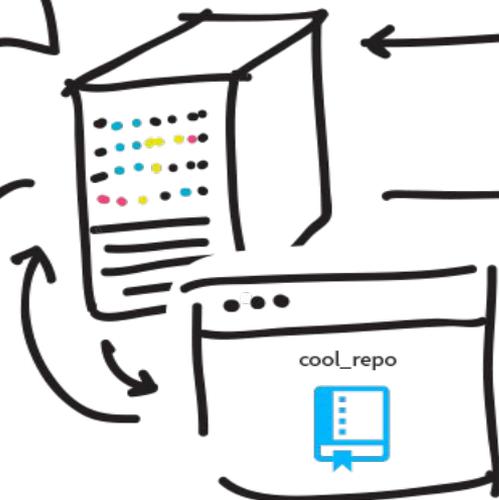
# LOCAL

Your computer talks
to the GitHub server
with **terminal**.

cool_repo

# LOCAL

Someone else's computer
talks to the GitHub server.
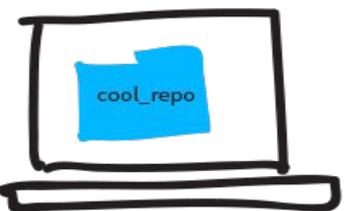
# Remote Control

- Create a new repo on GitHub.com and connect your local one to it

# Forking and Cloning



GitHub.com

jlord/git-it-electron

Fork

PR

stdavis/git-it-electron

Pull Only
Remote: Upstream

Clone

mylaptop/projects/git-it
-electron

Push/Pull

Remote: Origin
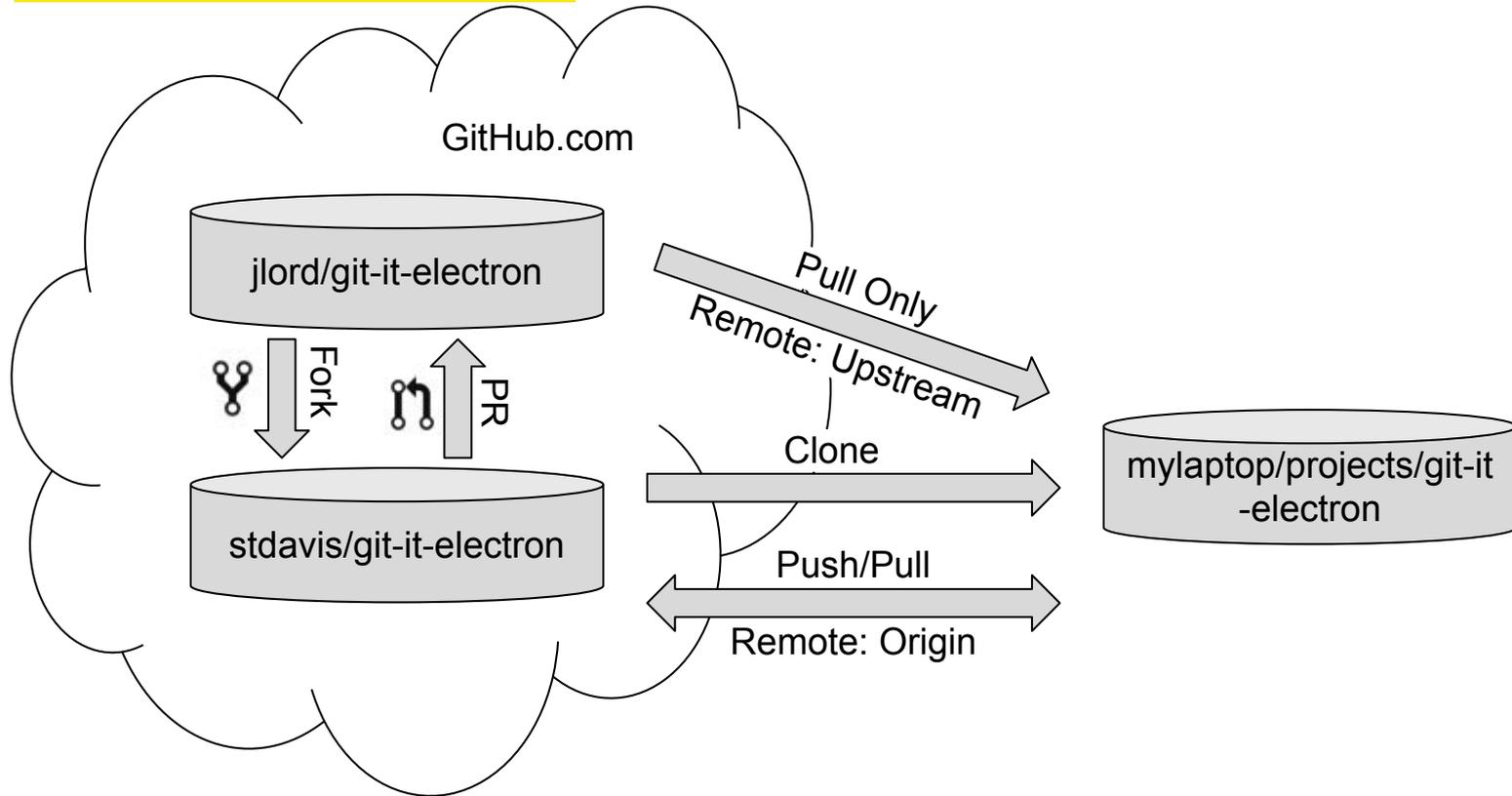
# Fork

A linked copy of a repository residing under a different account on GitHub.com

# Clone

Copy a remote repository onto your computer

# Forks & Clones

- Fork a project hosted on GitHub.com and clone locally

Tip:
Using a fork is not always appropriate. For example, japanese food tastes better when eaten with chopsticks.

# Branch

Do work without affecting others/master

# Merge

Move commits from one branch to another

guides.github.com/introduction/flow

master **vs.** gh-pages

# Branches Aren't Just for Birds

- Add a branch to your local repo

Tip:
You should give your branch a name that gives others a clue as to what you are working on (e.g. `scrolling-bug`, `remember-folder`).

# Collaborator vs. Contributor

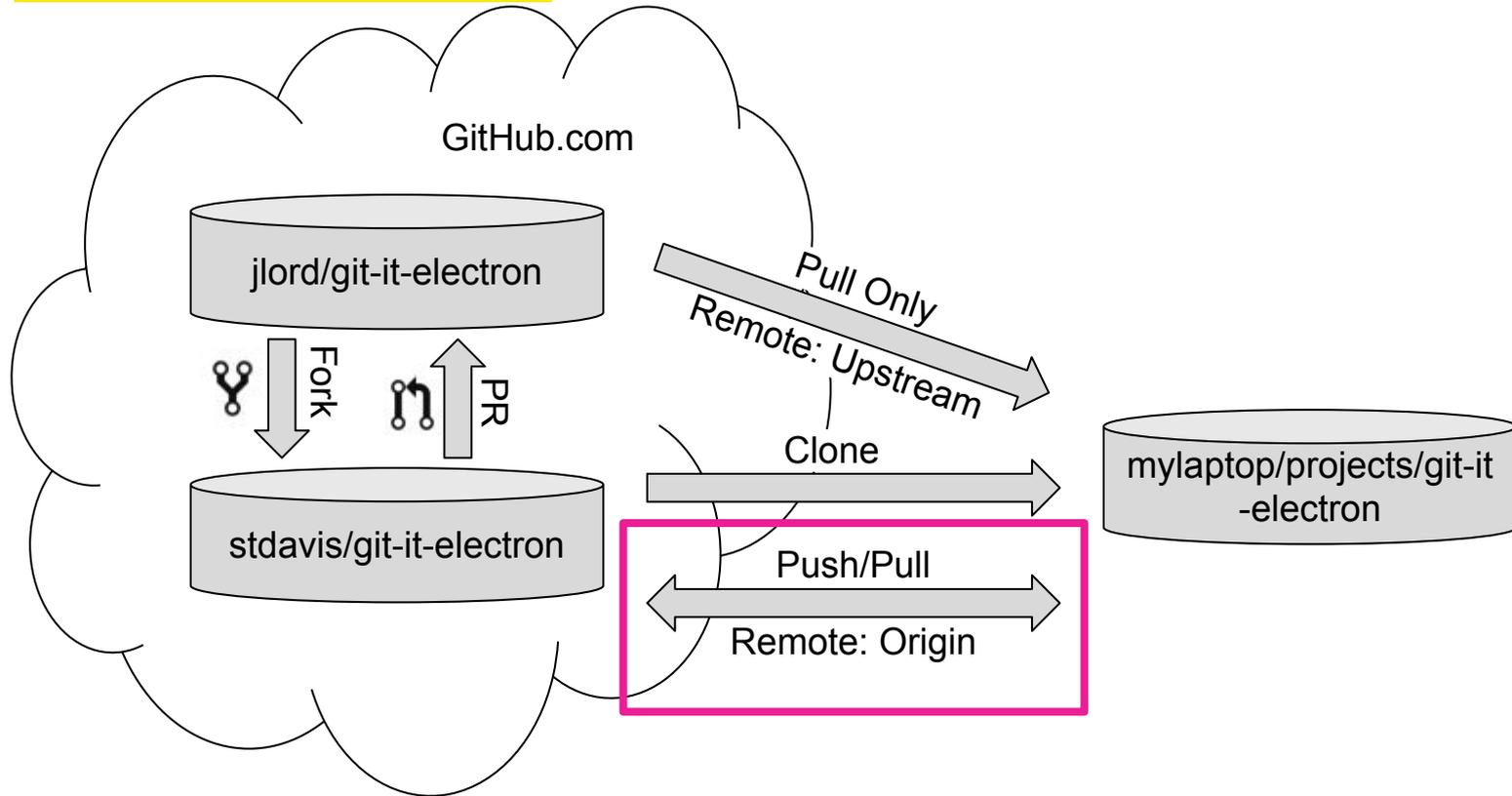# Collaborator

Someone with write access to a repo

# Contributor

Someone who has made contributions to a repo via a fork

# It's a Small World

- Add a collaborator to your forked repo

# Pulling from Origin

GitHub.com

jlord/git-it-electron

Fork

PR

stdavis/git-it-electron

Pull Only

Remote: Upstream

Clone

mylaptop/projects/git-it
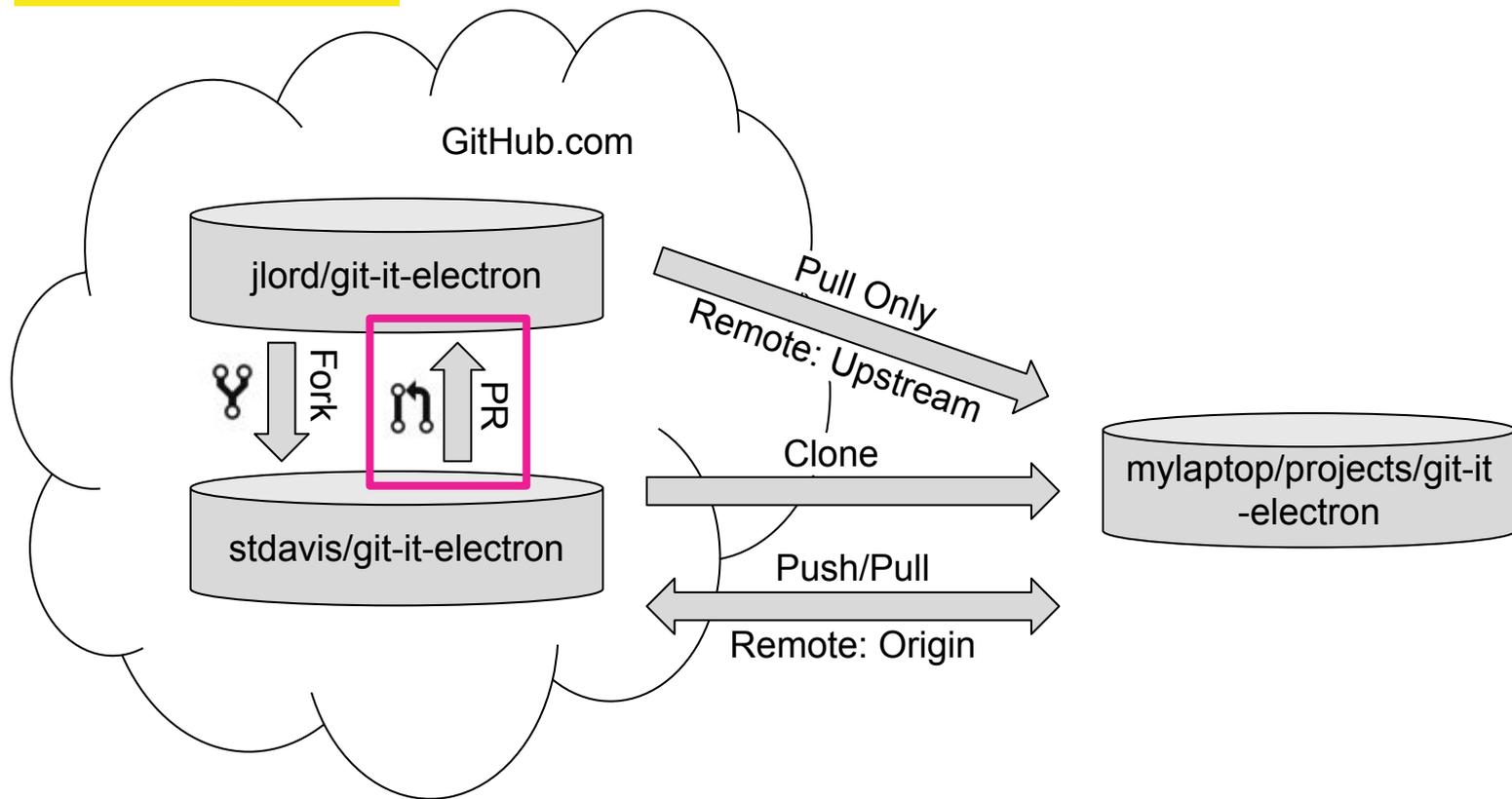-electron

Push/Pull

Remote: Origin

# Pull Never Out of Date

- Pull any changes to your fork down to your local repo

Tip:
If @reporobot didn't make any changes to your fork, don't worry about it. It shouldn't affect your ability to complete the rest of the exercises.

# Pull Requests

# Requesting You Pull Please

- Submit a Pull Request to the upstream repo

# Merge

Move commits from one branch to another

# Merge Tada

- Merge your branch into master and clean up

# Thanks!

stdavis@utah.gov
@sthomasdavis

## Other Resources

- guides.github.com
- The Official GitHub Training Manual
- training.github.com/kit

## Credits

- github.com/jlord/git-it-electron (Exercises & Images)