



CORIELL INSTITUTE

FOR MEDICAL RESEARCH

**Bioinformatics Research
Experience**

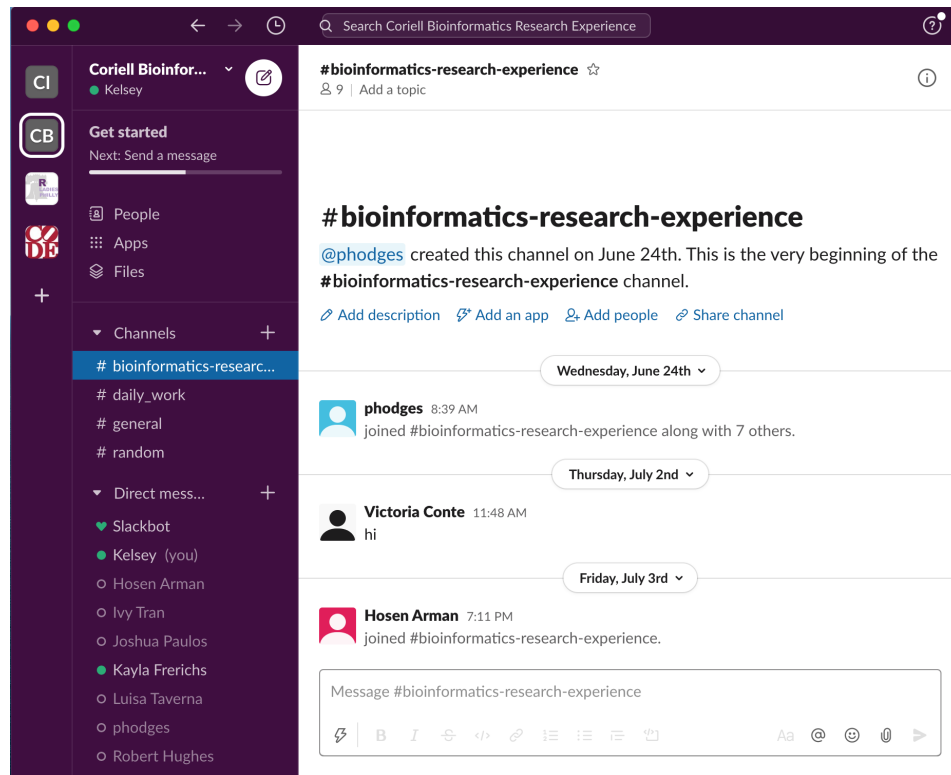
How this is going to work

- R > Linux > Independent Work
- Have to attend the daily lecture and the talk; office hours are optional if you need help with something; can also get help through email or Slack
- There will be work assigned daily that will be due 2 days later
- Talk
 - Tuesdays: Attend Coriell talk
 - Wednesdays: Talk from Coriell scientist
 - Fridays: You present

Daily Schedule	
8AM	
9AM	Daily Lecture
10AM	
11AM	
12PM	Talk
1PM	Office Hours
2PM	
3PM	
4PM	
5PM	
6PM	

Resources

Slack



Bioinformatics Research Experience Website

[View on GitHub](#)

2020_Bioinformatics_Research_Experience

Base repository for Coriell Institute's inaugural Bioinformatics Research Experience

Coriell Bioinformatics Research Experience 2020

The Bioinformatics Research Experience is a four-week research training program for undergraduate students interested in learning scientific biological data analysis.

Getting Started

Programs to Install

1. Zoom <https://zoom.us/download>
2. Slack <https://slack.com/>. If you're familiar with Slack, our slack name is coriellbioinformatics37156. Otherwise you can follow the attached directions in slack_instructions.pdf.
3. Download and install TeamViewer <https://www.teamviewer.com/en-us/>. This will allow the research experience team to screen share with your computer to assist with technical problems.
4. R. If you don't already have it installed, go to R Cloud <https://cloud.r-project.org/> to download and install R.
5. RStudio. Go to RStudio's website <https://rstudio.com/products/rstudio/download/> and download the FREE version.

Git and GitHub

2020-07-07

What is Git?

THIS IS GIT. IT TRACKS COLLABORATIVE WORK
ON PROJECTS THROUGH A BEAUTIFUL
DISTRIBUTED GRAPH THEORY TREE MODEL.

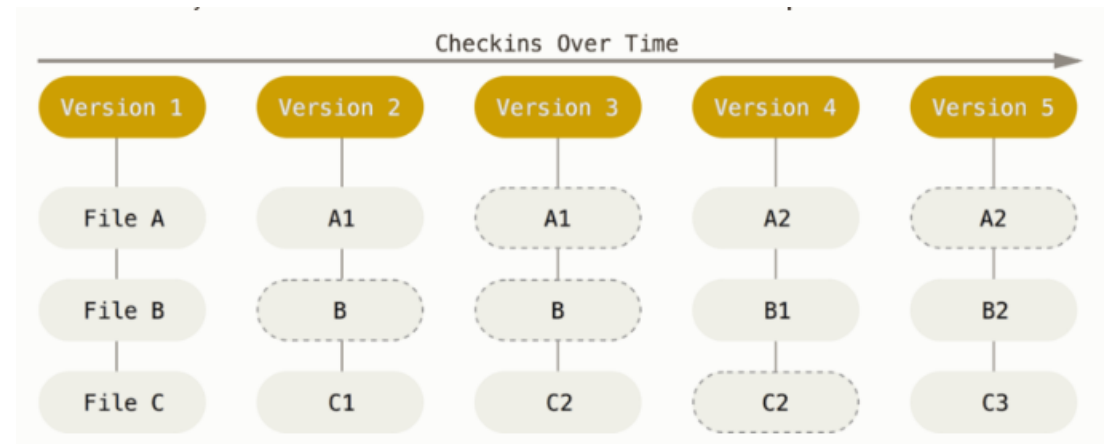
COOL. HOW DO WE USE IT?

NO IDEA. JUST MEMORIZE THESE SHELL
COMMANDS AND TYPE THEM TO SYNC UP.
IF YOU GET ERRORS, SAVE YOUR WORK
ELSEWHERE, DELETE THE PROJECT,
AND DOWNLOAD A FRESH COPY.



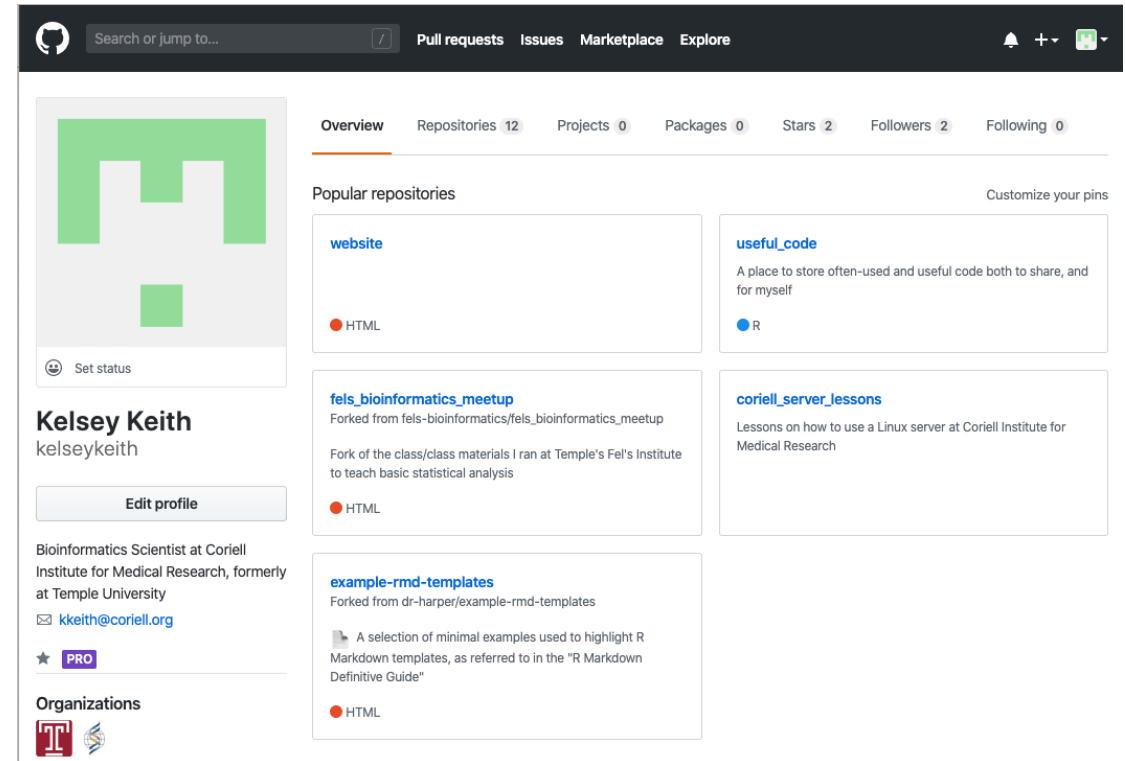
Git is a Version Control System

- Git works as a series of snapshots of a file system
- Originally made for collaborative development of the Linux operating system
- Every time you save your project through Git, Git takes a picture of it, with links between the current and past versions of files
- If you need to undo a change you can go back to previous versions of the file



What do we use Git for?

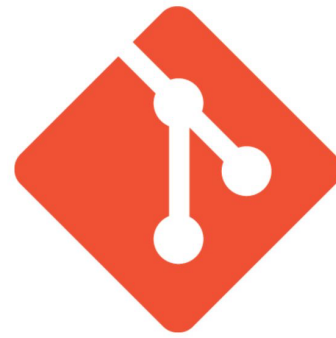
- Documenting a project's progress
- Working with other people
- Reproducible research
- Skills advertisement (for the future)



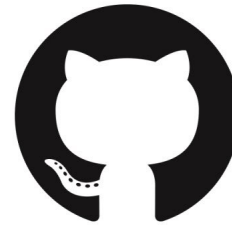
The image shows a screenshot of a GitHub profile page for Kelsey Keith. The profile includes a green and white avatar, a bio identifying her as a Bioinformatics Scientist at Coriell Institute for Medical Research, and a list of popular repositories. The repositories listed are 'website', 'fcls_bioinformatics_meetup', 'example-rmd-templates', 'useful_code', and 'coriell_server_lessons'. The page also shows navigation links for Pull requests, Issues, Marketplace, and Explore, along with statistics for Repositories (12), Projects (0), Packages (0), Stars (2), Followers (2), and Following (0).

Getting Started

Git, GitHub,
and GitHub
Desktop:
Does
everyone
have these
installed?



git

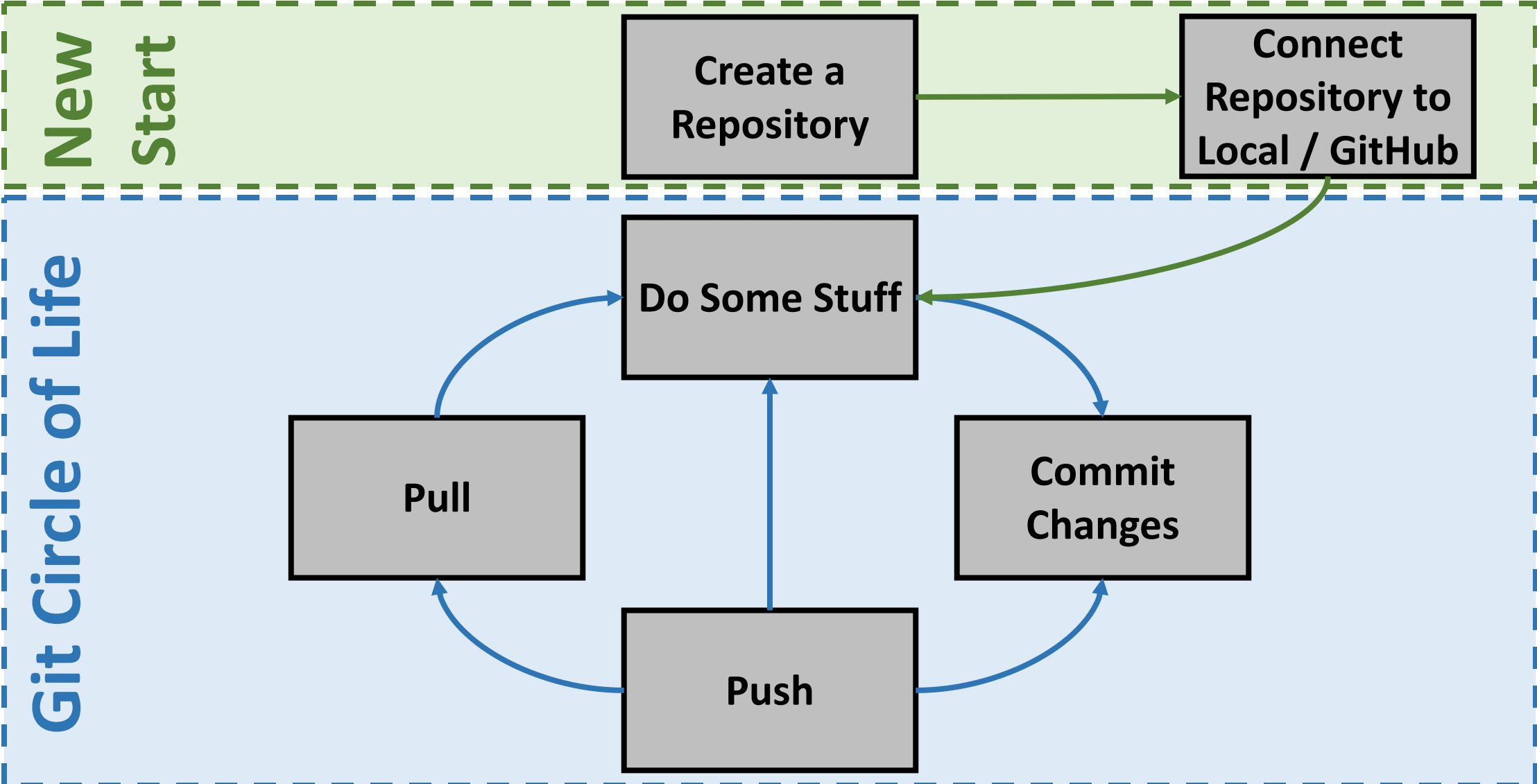


GitHub



Desktop

Basic Git Workflow



DEMO WITH
GITHUB DESKTOP

Today's Assignment

- Today's assignment is to get Git, GitHub, and GitHub Desktop working
- Should have received an email invitation
- Here's the link to today's assignment:
<https://classroom.github.com/a/kNgsFDtr>. You should already have received an email with the link and it also will be posted Slack in the #daily_work channel

References

- This lecture was mainly based on the excellent book Pro Git by Scott Chacon and Ben Straub. We're only scratching the surface with what you can do with git, so if you want to learn more I recommend checking it out. It's freely available online at <https://git-scm.com/book/en/v2>
- For working with GitHub Desktop, see the help documentation <https://help.github.com/en/desktop>