Day 02: More Complex Data Structures

Erin Rossiter

30 January, 2023

Today's plan

Today's plan

- Github Skills
- Review
  - Vectors
  - Object classes
- More complex data structures
  - Matrix, list, dataframe
  - Working with logicals
- Inclass activity
- Rmd help
- ChatGPT discussion

Announcements

Announcements

- Syllabus updated
  - drop lowest **two** psets
  - final project due dates
  - chatGPT guidelines
- Still todo: suggested readings (more important for advanced topics)
- Next week: we'll have a discussion about projects

Github Skills

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #1: Initial set up – downloading code for local use (review)

Using the online interface, you:

- Navigated to *my* repository
  - (github.com/erossiter/ProgrammingSpring2023)
- Forked it to create *your* repository
  - (github.com//ProgrammingSpring2023)
- Cloned your repository to your computer using Github Desktop
- Opened, edited, saved files *locally*
  - (~/documents/github/ProgrammingSpring2023)

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - » Review changes
    - Red is the old line; green is the new line
  - » Give a good Summary (title) and Description
- "Push origin"
  - » "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - » Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - » Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - » Review changes
    - Red is the old line; green is the new line
  - » Give a good Summary (title) and Description
- "Push origin"
  - » "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - » Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - » Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - » Review changes
    - Red is the old line; green is the new line
  - » Give a good Summary (title) and Description
- "Push origin"
  - » "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - » Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - » Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - » Review changes
    - Red is the old line; green is the new line
  - » Give a good Summary (title) and Description
- "Push origin"
  - » "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - » Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - » Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - » Review changes
    - Red is the old line; green is the new line
  - » Give a good Summary (title) and Description
- "Push origin"
  - » "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - » Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - » Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Skillset #2: Personal workflow – committing and pushing changes online

(Don't do these steps yet)

Today, we need to:

- "Commit" edits locally
  - Review changes
    - Red is the old line; green is the new line
  - Give a good Summary (title) and Description
- "Push origin"
  - "You have 1 local commit waiting to be pushed to GitHub"
- Review online, noting:
  - Your last commit shows up many places
    - Upper left of repo
    - Next to affected folders and files
    - History of all commits, click on "X commits" in upper right
  - Why is this useful?

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Personal workflow cont.

- Let's focus on local version control
- It can help you with your own organization, transparency, and experimentation
- You can see exact changes as you work and keep them (or not!)
- Tips:
  - You don't have to push every local commit online
    - Why might I commit and not push? What's the difference?
  - You can try something and revert back easily
    - Discard changes to a file before committing or
    - Undo a commit

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - in class activities
   - problem set
   - etc.
2. Examine "Changes" tab in Github Desktop
   - Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - make a simple edit to any file
   - review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Inclass Activity

1. Change the names of any files I provided but you edited (e.g., add initials on the end)
   - » in class activities
   - » problem set
   - » etc.
2. Examine "Changes" tab in Github Desktop
   - » Click through the files and skim through all changes
3. Write an informative Summary and Description
4. Commit (remember this is just a local commit)
5. Push online
6. Examine changes online (hint: refresh browser)
7. Go through process again
   - » make a simple edit to any file
   - » review, commit, push, view online

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

Skillset #3: Collaborative workflow – merging upstream changes

I'll commit and push changes to *my* repo

- problem sets
- class content
- etc.

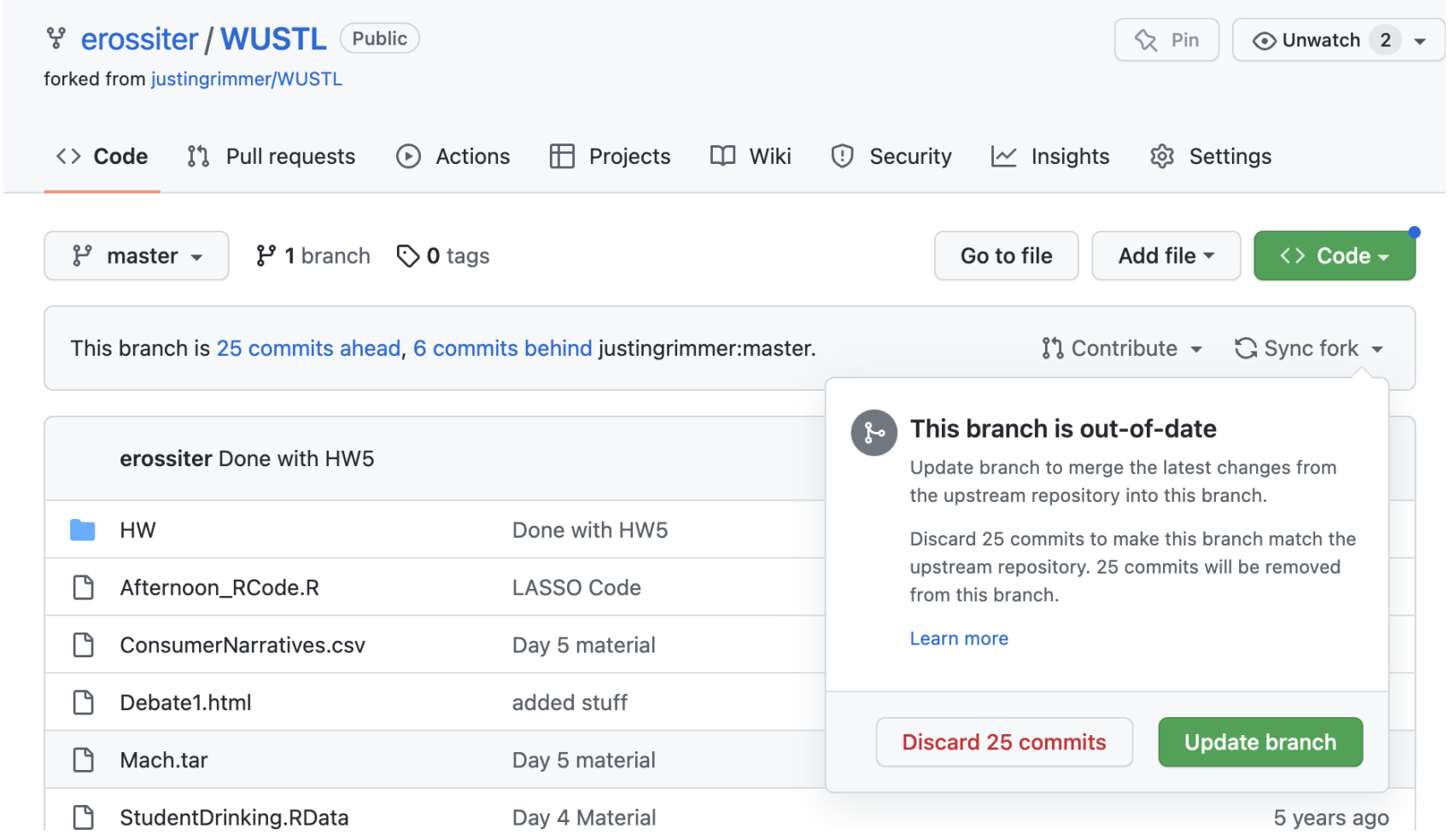
You'll want to merge my latest changes to your fork aka:

- update branch
- merge upstream changes
- sync your fork
- fetch my commits
- (sorry there's so much new language)

How? Online version

Ex: instructor added new slides, I added my homework → no conflicts → "Update branch"

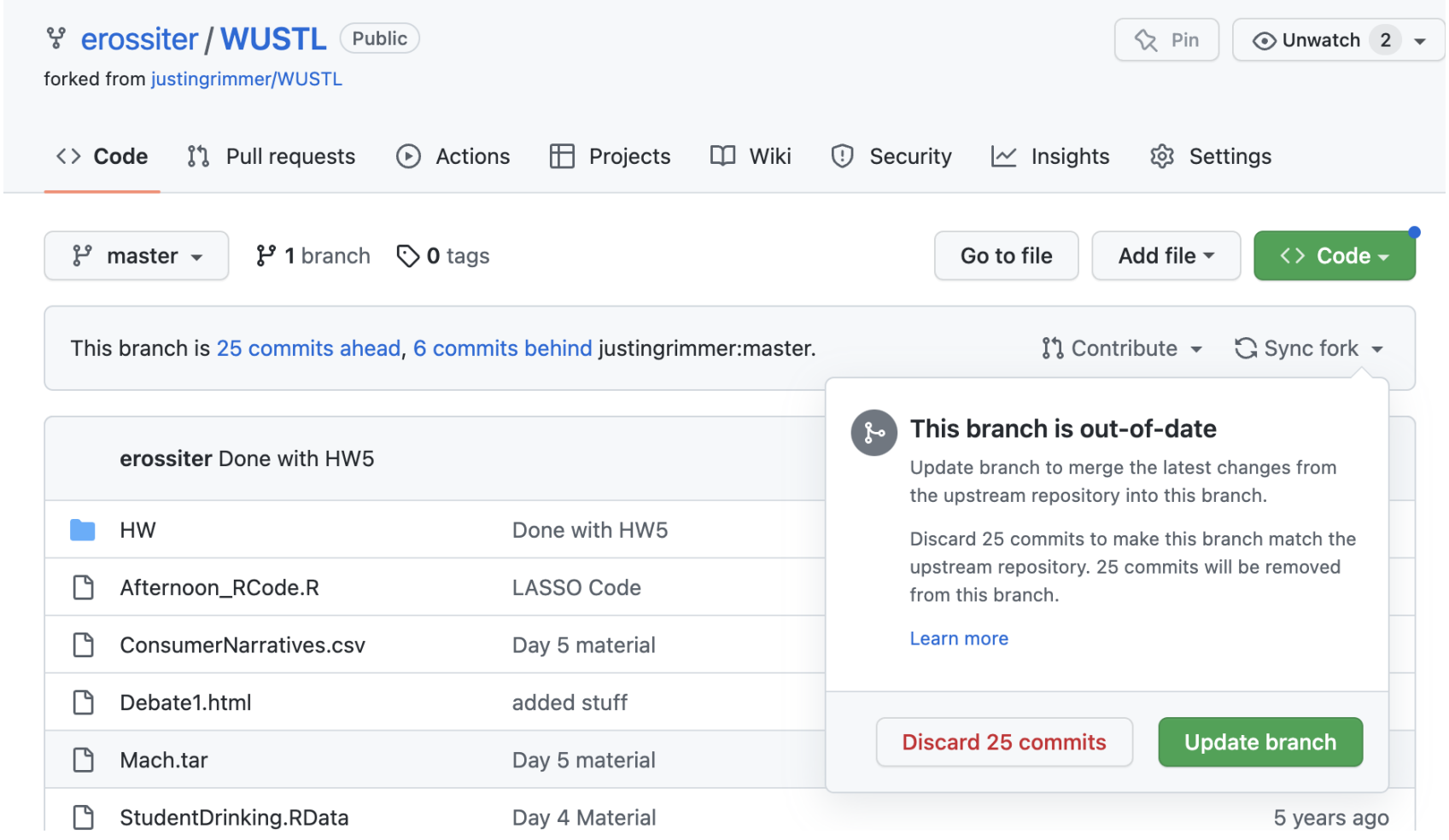
- **Do not discard your work!**
- Make sure all local changes are committed and pushed first



How? Online version

Ex: instructor added new slides, I added my homework → no conflicts → "Update branch"

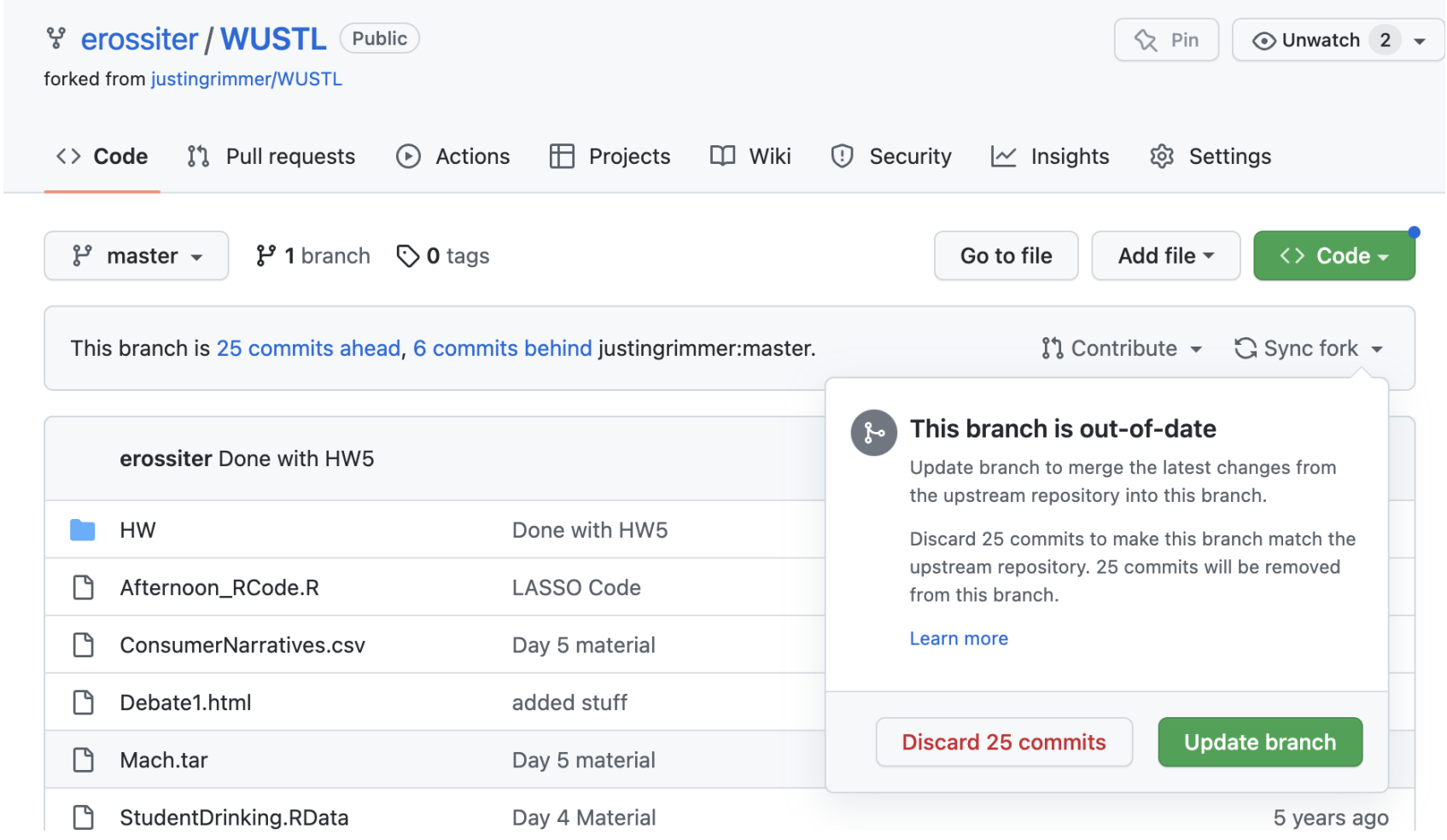
- **Do not discard your work!**
- Make sure all local changes are committed and pushed first



How? Online version

Ex: instructor added new slides, I added my homework → no conflicts → "Update branch"

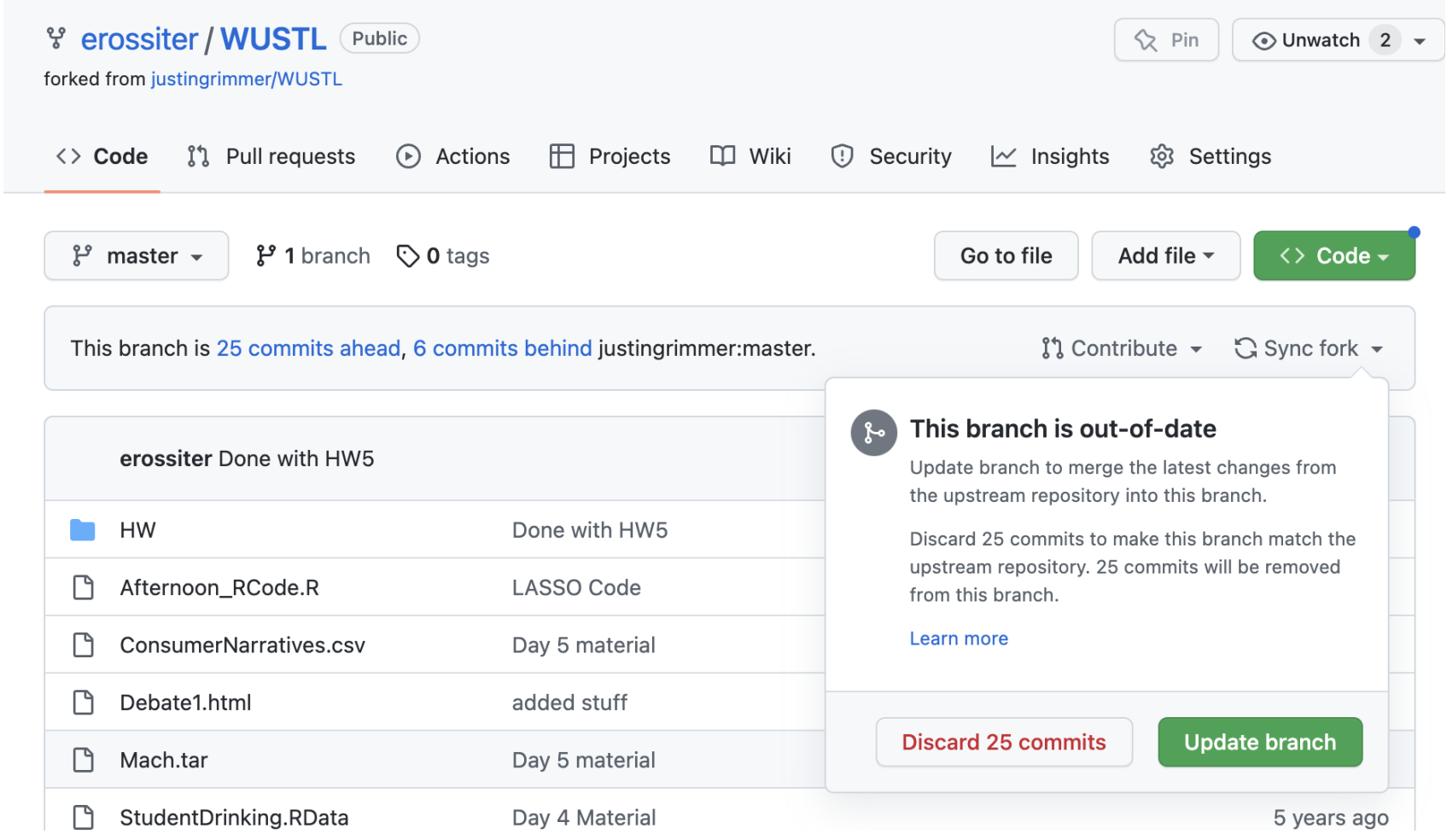
- **Do not discard your work!**
- Make sure all local changes are committed and pushed first



How? Online version

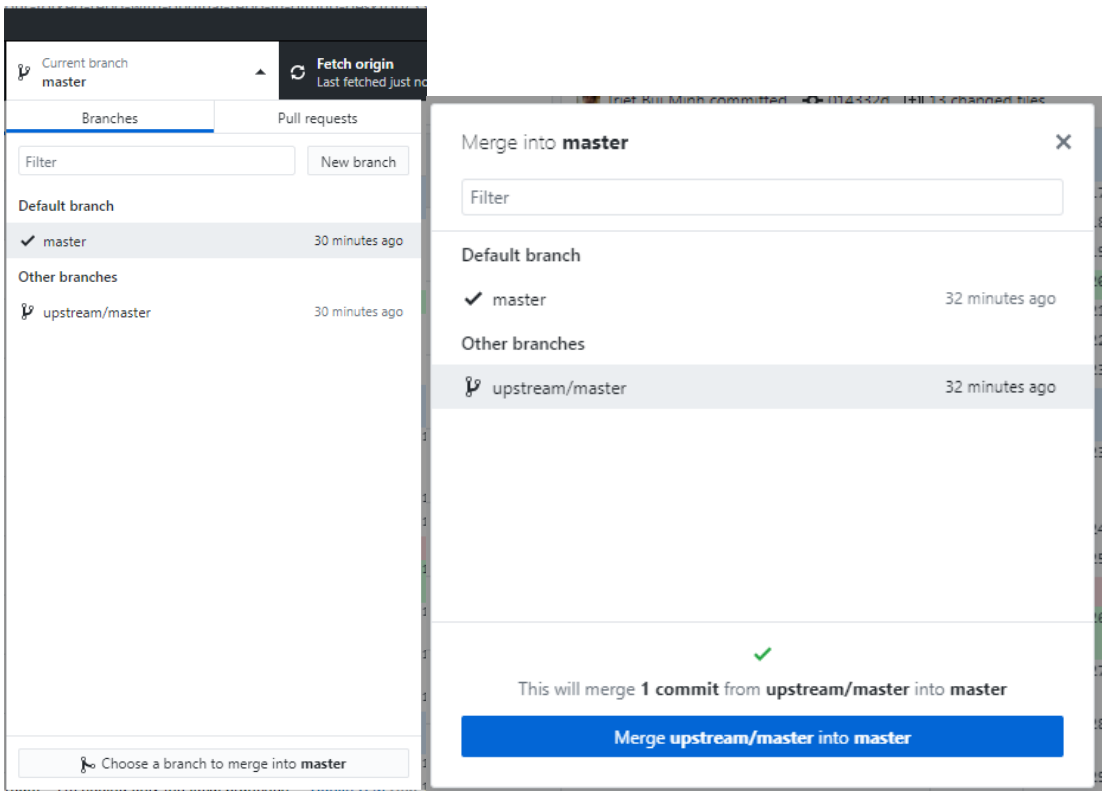
Ex: instructor added new slides, I added my homework → no conflicts → "Update branch"

- **Do not discard your work!**
- Make sure all local changes are committed and pushed first



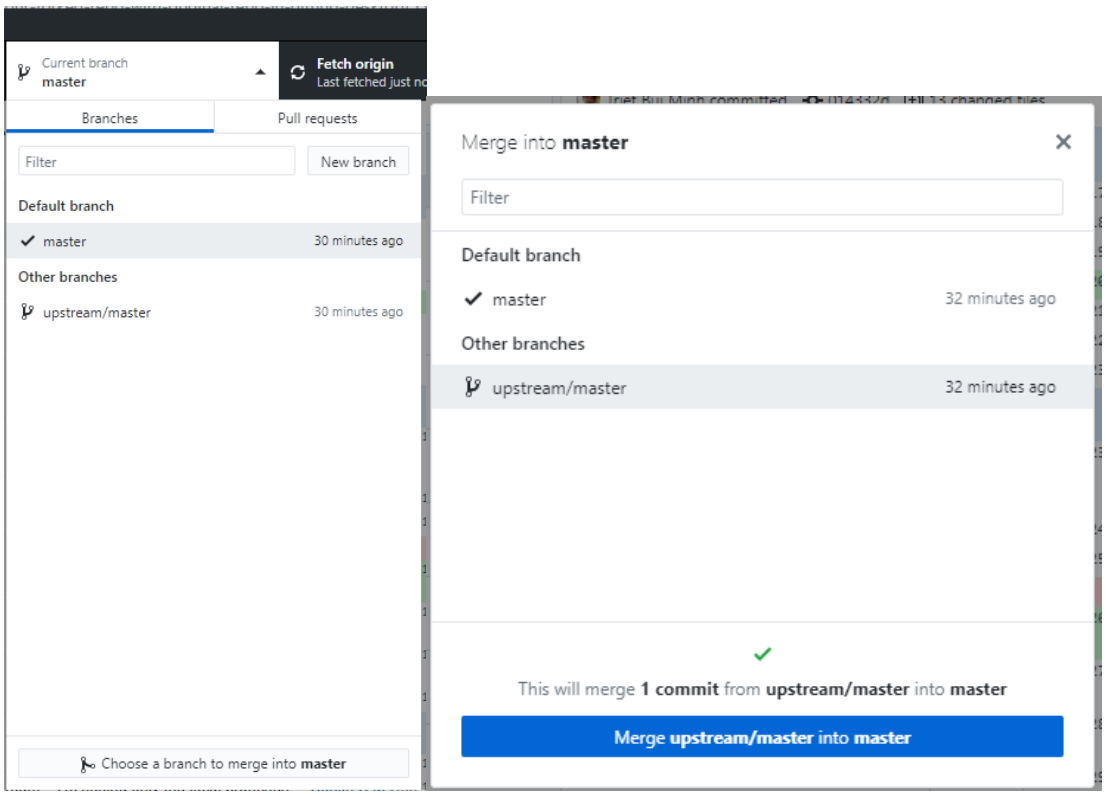
How? Desktop Version

- Make sure all local changes are committed and pushed first
- Click on the "current branch" tab and click the "choose a branch to merge into master" button at the bottom
- Select "upstream/master" (that's my repo)
  - Pulls the changes down from my repo
  - Bring your local clone up to date
- Then you can push changes online as we already learned



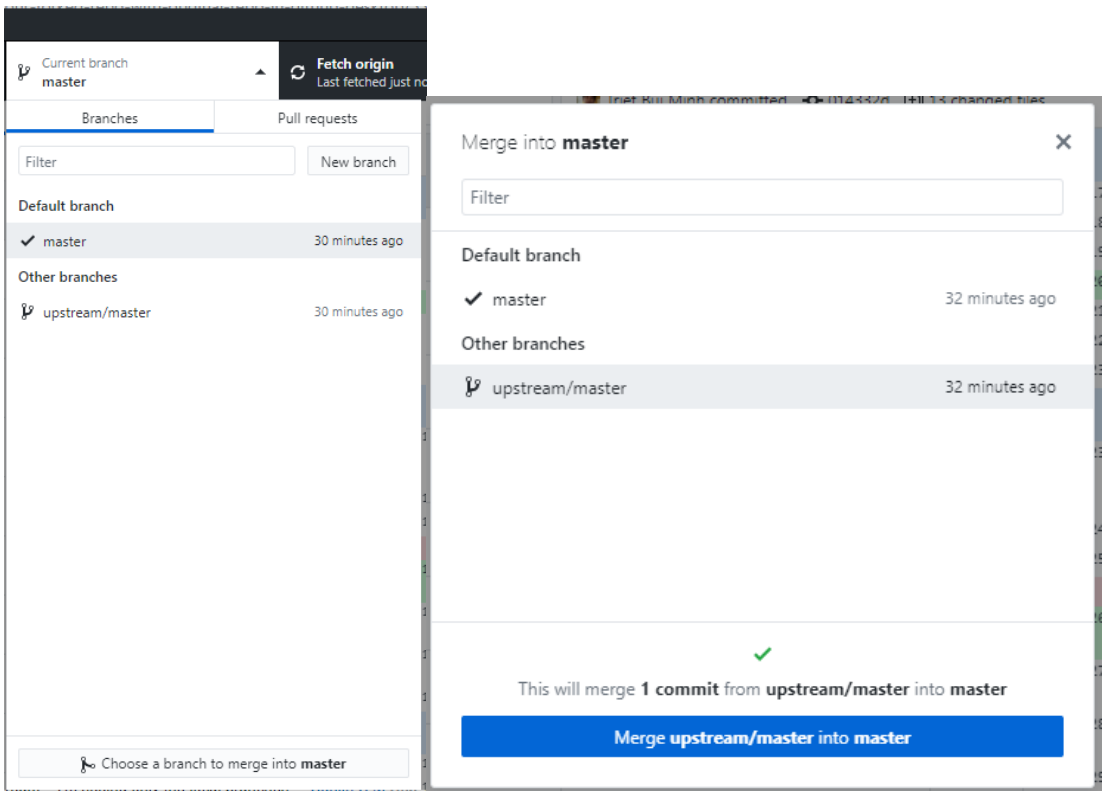
How? Desktop Version

- Make sure all local changes are committed and pushed first
- Click on the “current branch” tab and click the “choose a branch to merge into master” button at the bottom
- Select “upstream/master” (that’s my repo)
  - Pulls the changes down from my repo
  - Bring your local clone up to date
- Then you can push changes online as we already learned



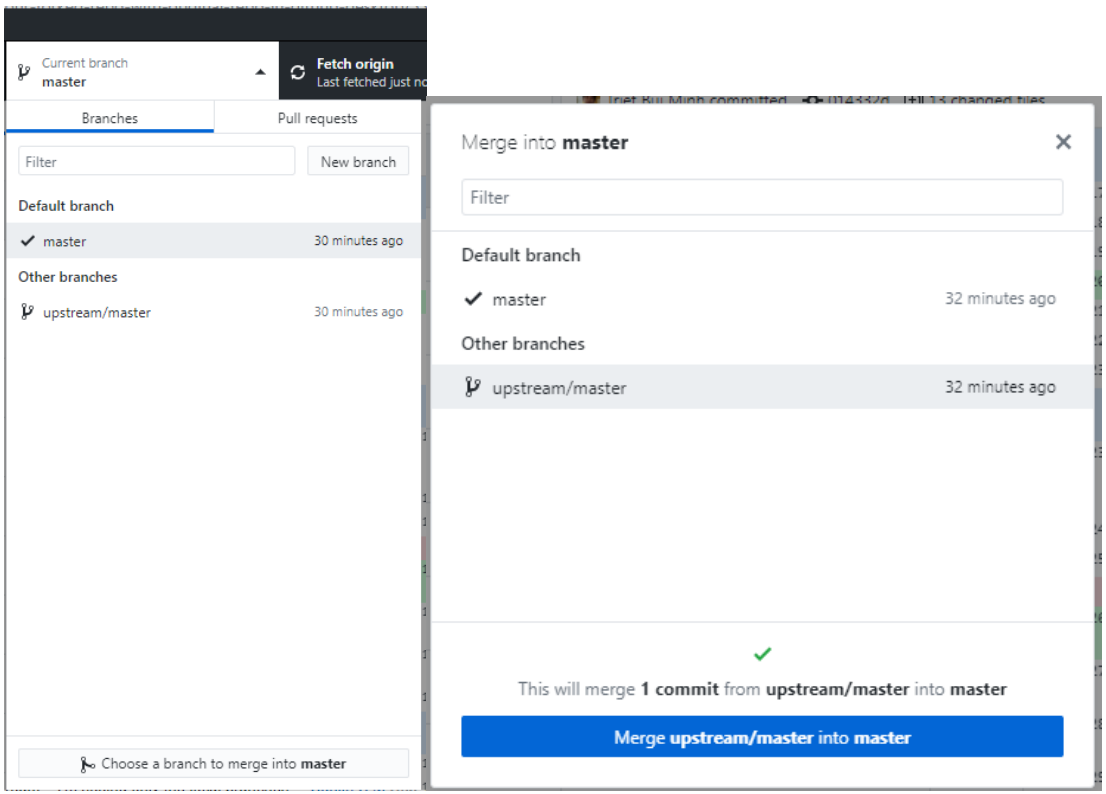
How? Desktop Version

- Make sure all local changes are committed and pushed first
- Click on the “current branch” tab and click the “choose a branch to merge into master” button at the bottom
- Select “upstream/master” (that’s my repo)
  - » Pulls the changes down from my repo
  - » Bring your local clone up to date
- Then you can push changes online as we already learned



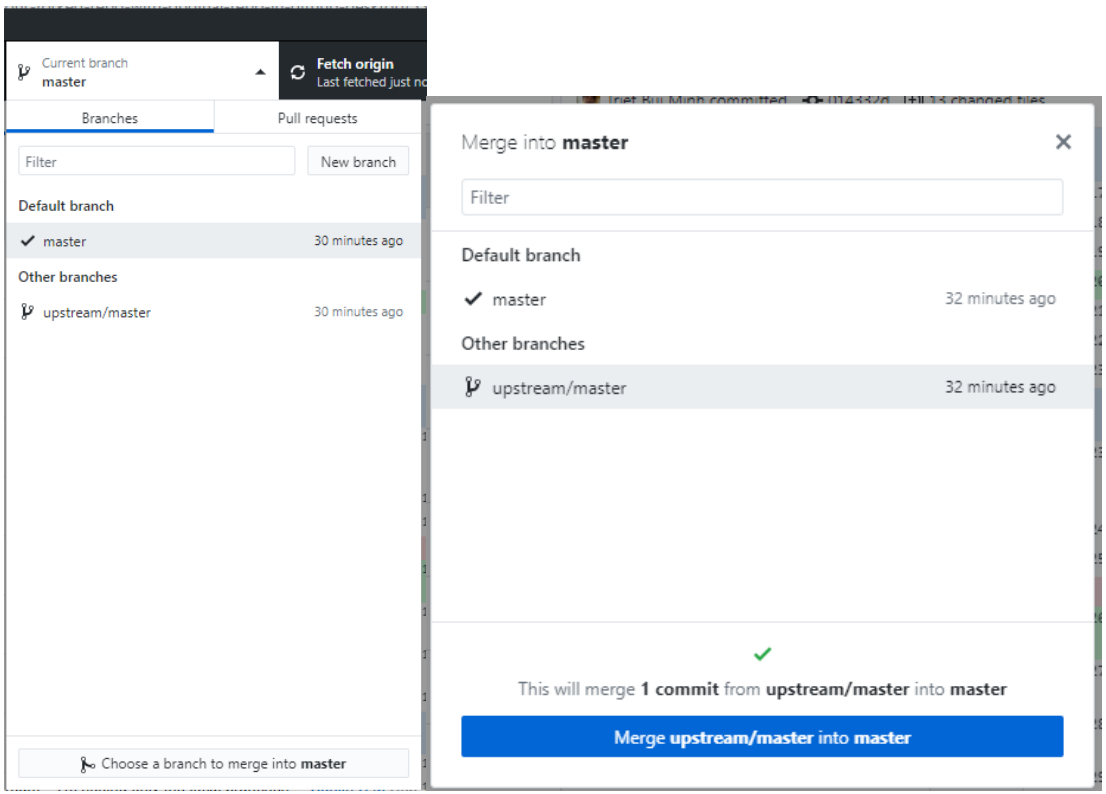
How? Desktop Version

- Make sure all local changes are committed and pushed first
- Click on the “current branch” tab and click the “choose a branch to merge into master” button at the bottom
- Select “upstream/master” (that’s my repo)
  - » Pulls the changes down from my repo
  - » Bring your local clone up to date
- Then you can push changes online as we already learned



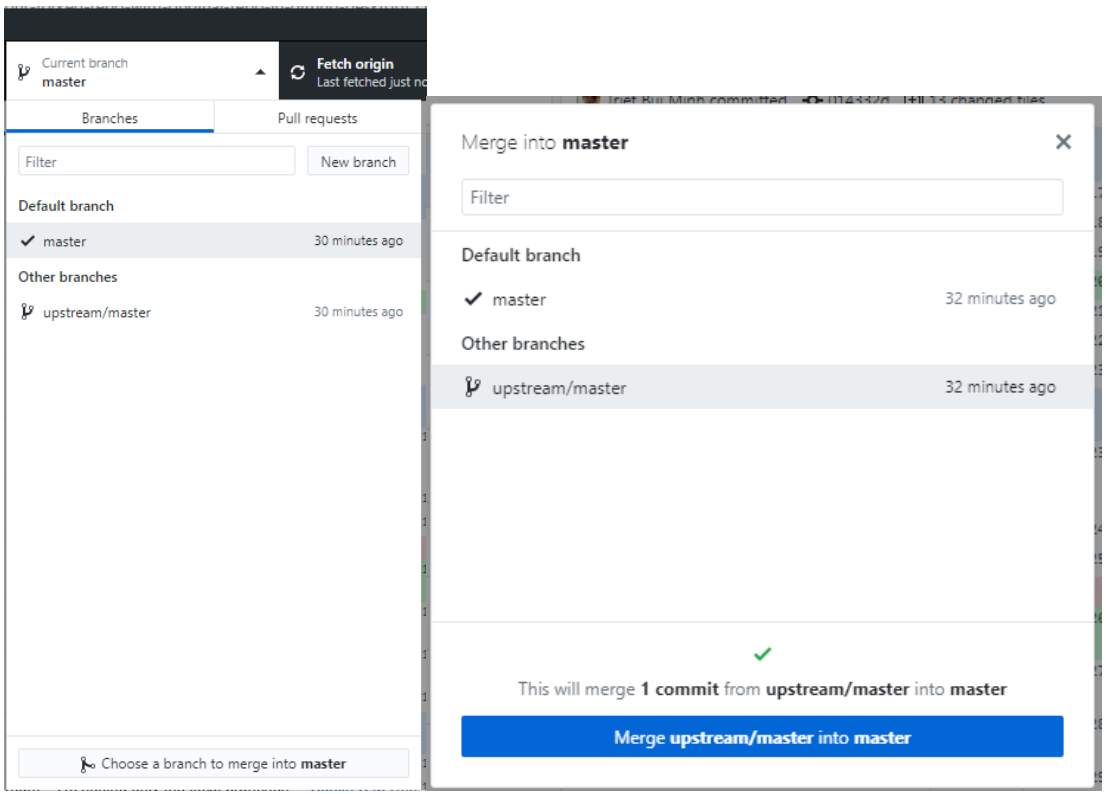
How? Desktop Version

- Make sure all local changes are committed and pushed first
- Click on the “current branch” tab and click the “choose a branch to merge into master” button at the bottom
- Select “upstream/master” (that’s my repo)
  - » Pulls the changes down from my repo
  - » Bring your local clone up to date
- Then you can push changes online as we already learned



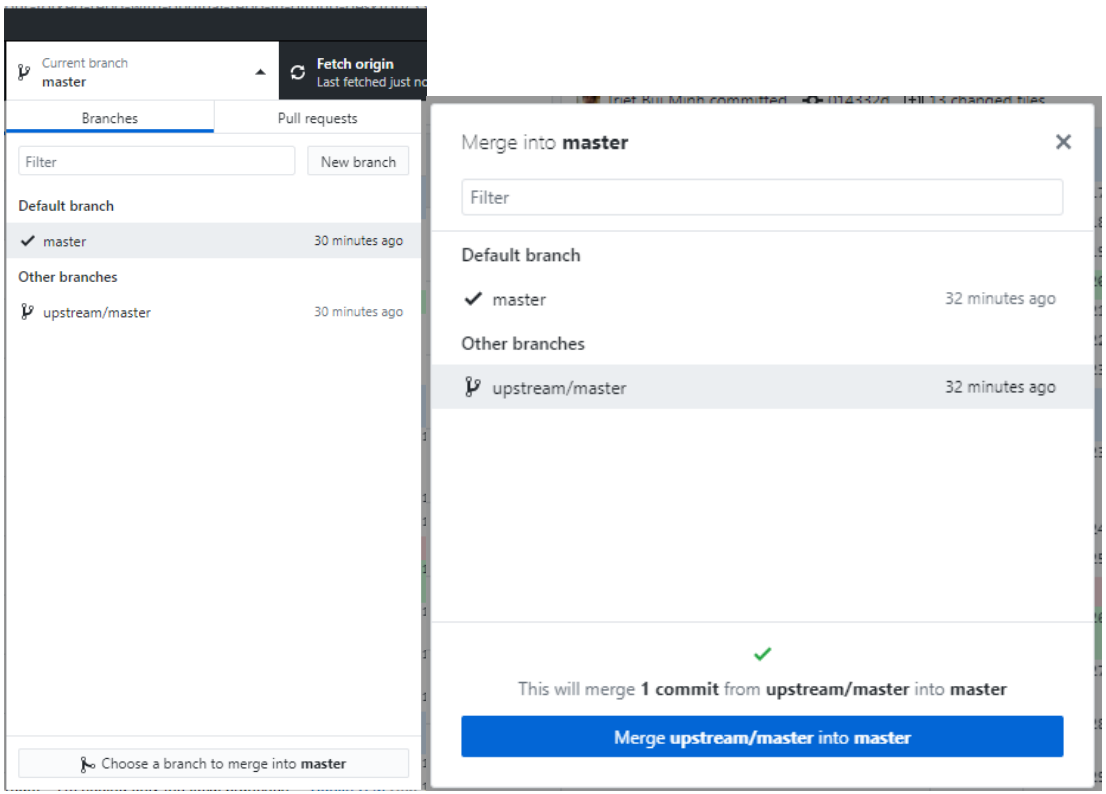
How? Desktop Version

- Make sure all local changes are committed and pushed first
- Click on the “current branch” tab and click the “choose a branch to merge into master” button at the bottom
- Select “upstream/master” (that’s my repo)
  - » Pulls the changes down from my repo
  - » Bring your local clone up to date
- Then you can push changes online as we already learned



How? Desktop Version

- Make sure all local changes are committed and pushed first
- Click on the “current branch” tab and click the “choose a branch to merge into master” button at the bottom
- Select “upstream/master” (that’s my repo)
  - » Pulls the changes down from my repo
  - » Bring your local clone up to date
- Then you can push changes online as we already learned



Rmd Overview

ChatGPT Discussion

What's going on?

ChatGPT is a generative text model, trained on a wide variety of source texts, such that it interacts in a conversational way *even generating R code*.

- Discussion of pros, cons, successes, and limitations if you're interested
- Banned from Stackoverflow because wrong too often

What's going on?

ChatGPT is a generative text model, trained on a wide variety of source texts, such that it interacts in a conversational way *even generating R code*.

- Discussion of pros, cons, successes, and limitations if you're interested
- Banned from Stackoverflow because wrong too often

What's going on?

ChatGPT is a generative text model, trained on a wide variety of source texts, such that it interacts in a conversational way *even generating R code*.

- Discussion of pros, cons, successes, and limitations if you're interested
- Banned from Stackoverflow because wrong too often

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Pros/cons for this class

Pros

- Since it synthesizes available resources into one succinct answer. For basic R, I've found it is correct and gives good explanations.

Cons

- It will impede your learning to just copy/paste the answers. If you don't generate the code yourself, you might become reliant, which isn't ideal because:
  - ChatGPT might not be available forever (e.g., might require payment, business could go under, etc.)
  - You might not become fluent in the basics, which will slow you down
- Hasn't been trained with texts newer than 2021

Neutral

- It might not help with advanced coding, which is our goal
- From a pedagogical standpoint, I'm not sure the best way to teach the language if I'm letting someone else speak for you.

Guidelines:

Balancing these pros and cons, I have the following rules, now on the syllabus:

- Use it on any question unless I explicitly say not to.
- Indicate in writing exactly what part of the answer chatGPT gave, including if it was the entire thing.
- Each *literal* keystroke must be your own as it says on the syllabus. Seriously. Type it yourself. (If I find evidence of copy/paste, the PSet grade will be a 0.)
- Finally, I trust that if chatGPT gives an answer, you'll dig into it to make sure you see why/how the code is working.

Guidelines:

Balancing these pros and cons, I have the following rules, now on the syllabus:

- Use it on any question unless I explicitly say not to.
- Indicate in writing exactly what part of the answer chatGPT gave, including if it was the entire thing.
- Each *literal* keystroke must be your own as it says on the syllabus. Seriously. Type it yourself. (If I find evidence of copy/paste, the PSet grade will be a 0.)
- Finally, I trust that if chatGPT gives an answer, you'll dig into it to make sure you see why/how the code is working.

Guidelines:

Balancing these pros and cons, I have the following rules, now on the syllabus:

- Use it on any question unless I explicitly say not to.
- Indicate in writing exactly what part of the answer chatGPT gave, including if it was the entire thing.
- Each *literal* keystroke must be your own as it says on the syllabus. Seriously. Type it yourself. (If I find evidence of copy/paste, the PSet grade will be a 0.)
- Finally, I trust that if chatGPT gives an answer, you'll dig into it to make sure you see why/how the code is working.

Guidelines:

Balancing these pros and cons, I have the following rules, now on the syllabus:

- Use it on any question unless I explicitly say not to.
- Indicate in writing exactly what part of the answer chatGPT gave, including if it was the entire thing.
- Each *literal* keystroke must be your own as it says on the syllabus. Seriously. Type it yourself. (If I find evidence of copy/paste, the PSet grade will be a 0.)
- Finally, I trust that if chatGPT gives an answer, you'll dig into it to make sure you see why/how the code is working.

Guidelines:

Balancing these pros and cons, I have the following rules, now on the syllabus:

- Use it on any question unless I explicitly say not to.
- Indicate in writing exactly what part of the answer chatGPT gave, including if it was the entire thing.
- Each *literal* keystroke must be your own as it says on the syllabus. Seriously. Type it yourself. (If I find evidence of copy/paste, the PSet grade will be a 0.)
- Finally, I trust that if chatGPT gives an answer, you'll dig into it to make sure you see why/how the code is working.

Upcoming

Upcoming

- PS01 due Tuesday (tomorrow) at 4pm EST via GitHub commit
  - late assignments will not be accepted
  - practice committing ASAP
- PS02 distributed tomorrow
- Next class – flow control (ifelse, loops) and advanced functions

Upcoming

- PS01 due Tuesday (tomorrow) at 4pm EST via GitHub commit
  - late assignments will not be accepted
  - practice committing ASAP
- PS02 distributed tomorrow
- Next class – flow control (ifelse, loops) and advanced functions

Upcoming

- PS01 due Tuesday (tomorrow) at 4pm EST via GitHub commit
  - late assignments will not be accepted
  - practice committing ASAP
- PS02 distributed tomorrow
- Next class – flow control (ifelse, loops) and advanced functions

Upcoming

- PS01 due Tuesday (tomorrow) at 4pm EST via GitHub commit
  - late assignments will not be accepted
  - practice committing ASAP
- PS02 distributed tomorrow
- Next class – flow control (ifelse, loops) and advanced functions

Upcoming

- PS01 due Tuesday (tomorrow) at 4pm EST via GitHub commit
  - late assignments will not be accepted
  - practice committing ASAP
- PS02 distributed tomorrow
- Next class – flow control (ifelse, loops) and advanced functions