Commit early! Commit often!
A gentle introduction to the joy of Git and GitHub

Isaiah Lankham
Kaiser Permanente
Center for Health Research
Portland, OR

Matthew T. Slaughter
Kaiser Permanente
Center for Health Research
Portland, OR

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Who "gits" it?

Raise Your Hand if...

✓ you've had issues working with code sent to you as an email attachment?

✓ you've had issues determining which version of a program is the "most recent"?

✓ you've suspected the word "final" in a filename is a lie?

Example files: https://github.com/saspy-bffs
Common Workflows for GitHub

**Theme.** GitHub lowers the friction of collaboration (even when working alone)

**Workflow 1.** Commits in "Main Branch"

**Workflow 2.** Commits in "Feature Branch" + Pull Request

**Workflow 3.** Fork + Commits in "Feature Branch" + Pull Request

**Workflow 4.** Fork + Clone + Commits in "Feature Branch" + Push + Pull Request

Example files: https://github.com/saspy-bffs

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Common Workflows for GitHub

**Theme.** GitHub lowers the friction of collaboration (even when working alone)

**Workflow 1.** Commits in "Main Branch"

- **Advantages**
  - Immutable commit history provides a detailed project audit trail

- **Disadvantages**
  - Discourages "exploratory coding"
  - Difficult to simultaneously collaborate on the same file
  - Everyone has the same permissions to change the main branch

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**Workflow 2.** Commits in "Feature Branch" + Pull Request (aka PR)

Advantages
- Immutable commit history
- Enables "exploratory coding"
- Enables simultaneous collaboration
- Enables differentiated permissions (controlling changes to main branch)

Main Disadvantage: Added complexity
**Common Workflows for GitHub**

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**Workflow 3.** Fork + Commits in "Feature Branch" + Pull Request (aka PR)

Main Advantage: This enables us to "suggest" unsolicited changes to someone's project (e.g., open-source projects on GitHub).

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Common Workflows for GitHub

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**Workflow 4.** Fork + Clone + Commits in "Feature Branch" + Push + Pull Request

```
main branch of another repo
  fork
    main branch of our fork
      clone
        local clone
          branch
            feature branch
              commit changes
                push
                  feature branch
                    open a PR
                      feature branch of original fork
```

**Main Advantage**

We can use our favorite tools to write our code!

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Call to Action!

• **Takeaway.** Git and GitHub are amazing tools for collaboration, even when collaborating with just your (past or future) self!

• **Just Do It.** Start putting code for personal projects on GitHub, even if it’s not polished!

• **Embrace the Open Source Ethos.** Go fork a GitHub repo, make a small change (e.g., fix a typo), and open a PR today!

• **Keep up the Good Work.** All of the materials for this workshop are on GitHub, including a detailed overview of the Git CLI!

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