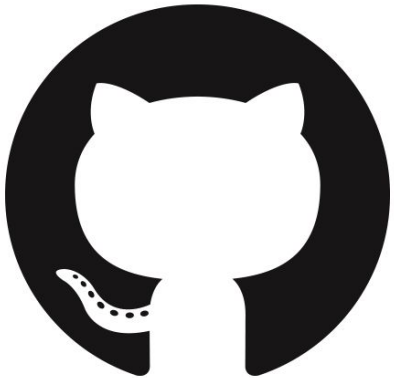
Neuro Data Science 2019: Using GitHub for Project Collaboration

What is Github?

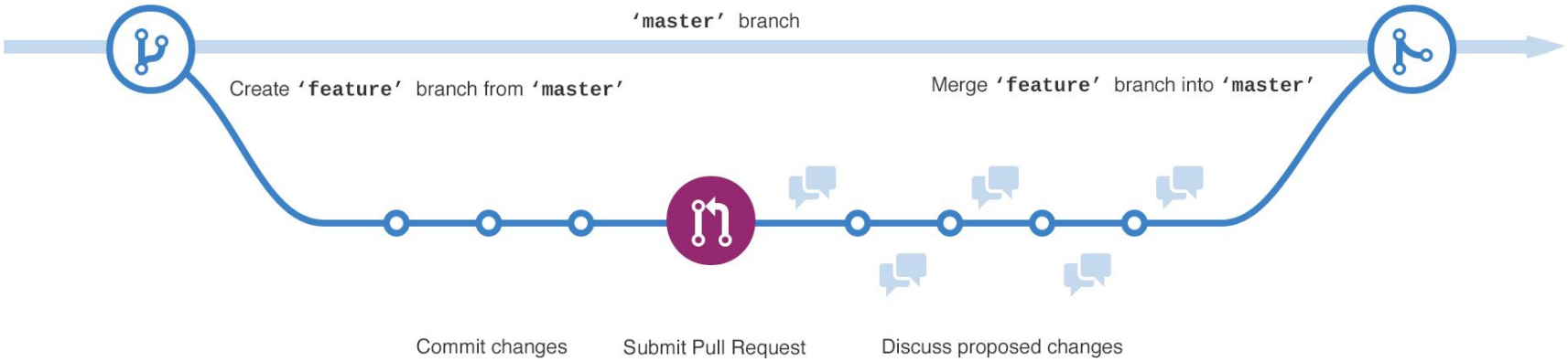
- Git is a language used for version control
- Github offers a platform to store and share code online
    - Used for collaborating on projects



How do we collaborate on Github?

1. Create a repository or fork an existing repo
2. Create a branch.
3. Make and commit changes.
4. Open a Pull Request (PR).
5. Merge a PR.

Overview of making and incorporating changes



Step 1: Create a GitHub repository

- A repository holds a single project.
- Repositories can contain
  - Folders
  - Text files
  - README documentation files
  - Datasets *
  - Scripts
  - Jupyter notebooks

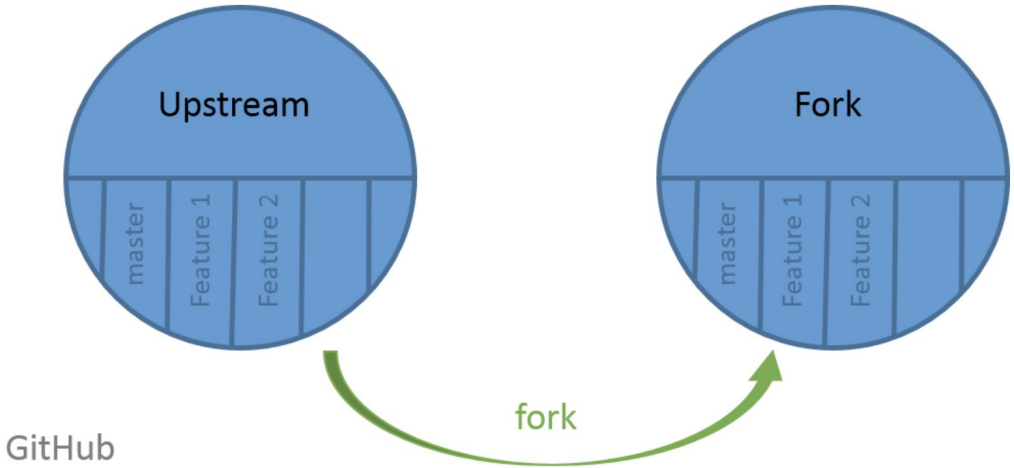
* We'll get back to this, but for now, neuroimaging datasets are too big to store on Github easily

Step 2: Branches

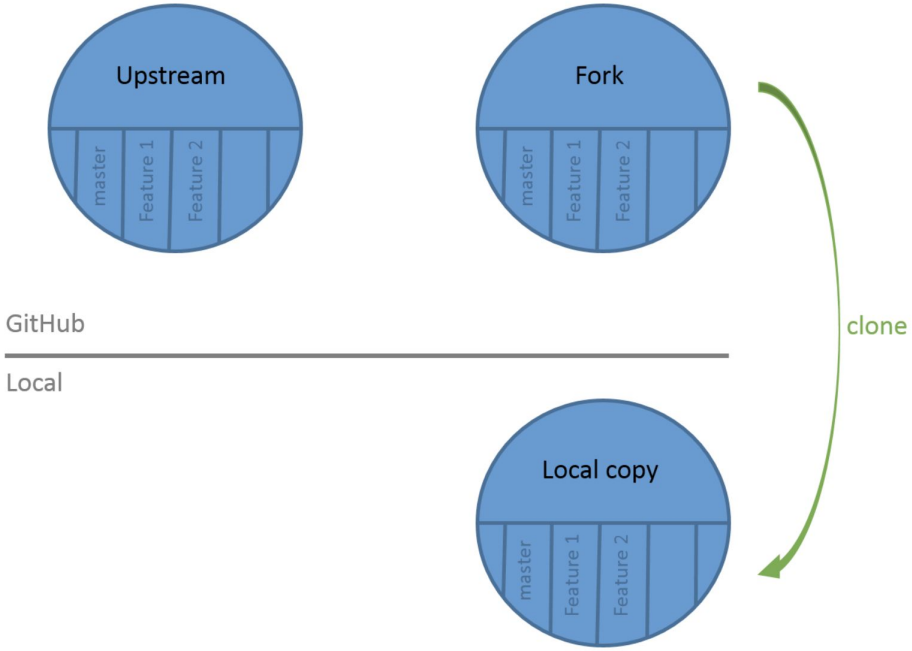
- Good practice: a new branch per feature
- **Branching** is a way to work on different *versions* of a project at one time.
- By default, your repository has one **branch** named “master”.
- When you create a **branch** of the “master” branch, you’re making a copy of the “master” branch as it exists at that point in time

Open-source development process

- Contributing to an existing project requires forking the repo
  - Your Github account will have a copy of the repo associated with it



Clone the GitHub repo to your computer



GitHub Etiquette

- Keep commits atomic
- One PR per feature → a descriptive message about the feature
- Keep commit messages under 50 characters
    - Short commits are more readable
- Don’t include curse words in your commit messages
- Generally - just be polite throughout the review process