git and GitHub

git is a software version control system. git is useful for tracking changes to code, including systematic approaches to adding new features or changing functionality. We use git to track and save code as we're working on it.

GitHub is one of several online repositories for sharing code (and is commonly used as a remote repository for git). We use GitHub to facilitate collaboration and share code for papers and other projects.

Setting Up Project Repositories

Meta-Repositories

> **Repository Visibility**
>
> It may be prudent to set up initial repositories as private until you're ready to release the code (which should always be done **ahead** of paper submission).

When you start a new project, you should create a GitHub meta-repository right away. You can do this in your personal account or as part of the `srikrishnan-lab` organization. Make sure that your repository name is informative; we will eventually rename this to align with a paper (something like `lead_author-etal-year`).

A meta-repository is a repository which creates a single point of access for all resources needed to create a published work. We use meta-repositories to avoid mixing data, models, and analysis codes, which can inhibit reproducibility, make the repository cluttered, and make it difficult to re-use models for subsequent projects. You can fork our meta-repository template as a starting point.

Repository Guidelines

Some guidelines on how to structure your meta-repository:

- Model codes and data should be minted and archived somewhere like Zenodo (this can be set up to occur automatically upon a GitHub release).
    - You can link to external models and data, particularly if they have a DOI and/or a version number.