An Introduction to Git and GitHub

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1 Introduction

What we'll cover today:

1. Git is a free and open source version control system. It makes development more friendly by keeping track of all your changes for you.
2. GitHub is a web based hosting service. It allows use to put your projects online so that other people can learn about them and contribute.

2 Why Should I Care

- Almost everything is on GitHub
- Git and GitHub combine to make development and collaboration easy
- It's an excellent way to show off your code/projects/analyses with others
- It's really easy to create web pages, documentation, or even your own web site!
- They're free!

3 The Basic Git Workflow

3.1 When you start a new project

1. Use `cd` to navigate to the directory
2. Use `git init` to initialize a new git repository
3. Use `git status` to see what's going on
4. Use `git add --all` to tell git to track all files
5. Use `git commit -m "Initial commit"` to store your files

3.2 After you've made some edits

1. Use `git status` to see what's changed
2. Use `git add list-of-files` to prepare the changes
3. Use `git commit -m "commit message"` to record your files
4. Use `git status` to check the current status

3.3 Creating a GitHub repository

1. Login to GitHub and create a new repository
2. Use `git remote add origin https://github.com/username/reponame.git` to create a pointer named *origin*. This tells git where the GitHub repository is located.
3. Use `git push -u origin master` to send your repository to GitHub

4   More Resources

- [Collaboration and time travel: version control with git, github and RStudio](#) presented by Rstudio and Hadley Wickham!
- Github's guide to [Set up Git](#)
- [Setting up Git through RStudio](#) (Part 1)
- [Using Branches with git](#) (Part 2). Definitely follow the link he posts. It's fantastic.
- [GitHub Pages](#) These are how you can create web pages using GitHub
- Code School's [Try Git](#) tutorial
- Karl Broman's [git/github guide](#)
- [Slidify](#). This is how I got started (though I would not recommend getting started by trying to figure out Slidify). Minor note: I've not yet been able to get the `publish` function to work on a Windows machine.