GitHub Cheat Sheet

Econ 213R - Applied Machine Learning

What is GitHub?

- Explain idea of GitHub
- Define "repository"
- Define "fork", "clone", "commit", "push/pull"
- Explain what a README is

Register for GitHub

First, you need to make an account with GitHub. Go to `www.github.com`. Sign up from the home page with any email and username you want. Follow the initial signup steps. Note that private repositories require monthly payments; however, you can have an unlimited number of public repositories for free. Once you are done signing up, you are ready to create and fork repositories.

Creating Repositories

Navigate to your GitHub profile. It should look something like Figure 1.

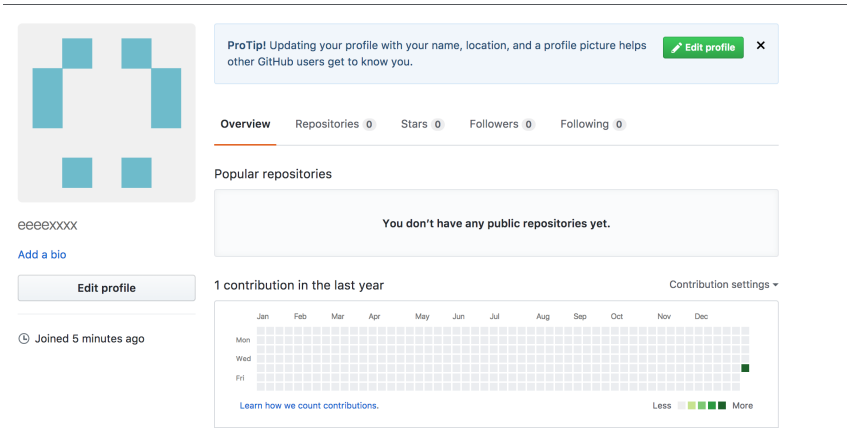

Figure 1: Profile Screen

Click the "Repositories" tab. Click the button that says "New" (see Figure 2).

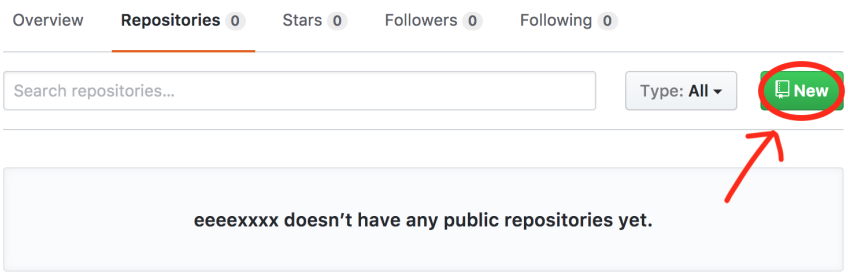

Figure 2: New Repository

Name your repository. It is customary to use dashes instead of underscores in repository names. Make sure to initialize the repository with a README.md (see Figure 3). If you accidentally forget to do this, that's okay; you can always add a README later.

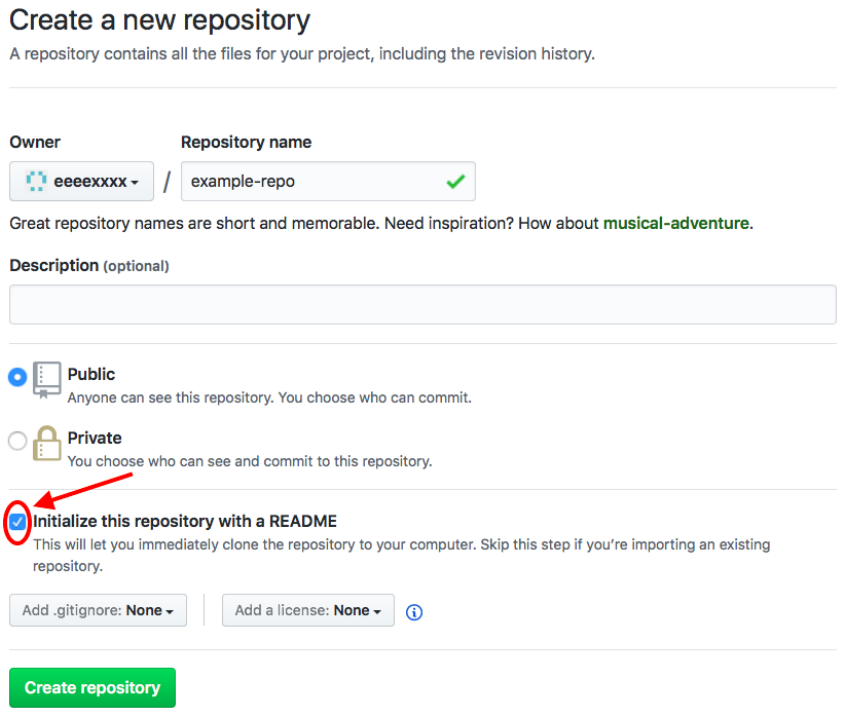

Figure 3: Initialize the repository.

Click "Create Repository" at the bottom of the page. You should see a page that looks like Figure 4.

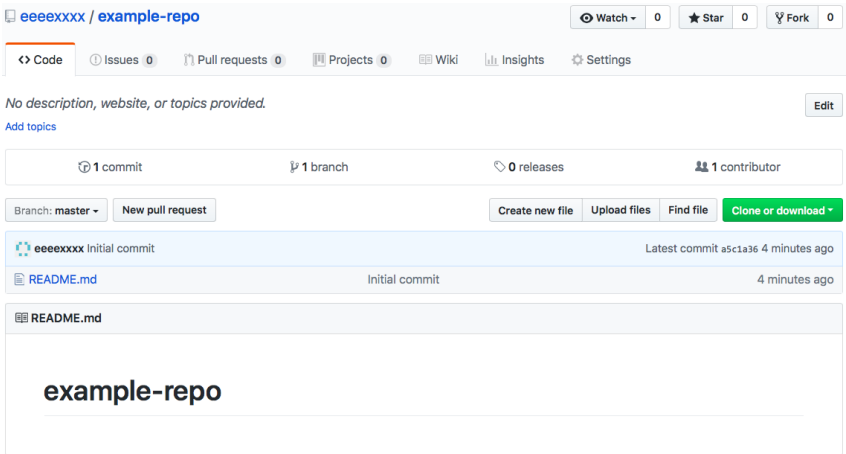

Figure 4: Repository screen.

Congratulations! You have just created your first GitHub repository.

Making Changes to Repositories

There are a few ways to upload and change files in a GitHub repository. The most common way to modify repositories is via the command line; see the next subsection for command line instructions. It is highly, *highly* recommended that you learn the command line to modify

repositories. The command line allows you to more freedom to modify your repositories and branches, and can streamline your workflow. However, you can use the GitHub website to upload and download files to and from repositories. You can also modify files using the website. Note that you can't run Jupyter notebooks on the GitHub website, and when you try to edit Jupyter notebooks on the website, you have to comb through lots of nasty JSON lingo. If you choose to use the website to make changes to the GitHub repository, you will have to download the Jupyter notebook, modify it on a local machine, and upload it back to the repository. Instructions for using the website are in the subsection following the command line instructions.

Using Command Line

Let's walk through an example together. In this example, we will clone the repository to a local machine, create a Jupyter notebook, add it to the repository, and push the changes.

Making Changes

Committing Changes

Pulling Changes

Using the Website

Downloading Files

Uploading Files

Forking Repositories

Navigate to the class repository. The link is `https://github.com/tfolkman/byu_econ_applied_machine_learning`.

Deleting Repositories

PROCEED WITH CAUTION. This action cannot be undone.