

Math 355: Math for Machine Learning

Fall 2019

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Day 1 Introduction to GitHub

Getting started with Git

Today we will discuss the delivery method of all course materials, assignments, and projects. This method will rely on learning `git`.

- According to Wikipedia, “Git is a version control system that is used for software development and other version control tasks. As a distributed revision control system it is aimed at speed, data integrity, and support for distributed, non-linear workflows.”
- Basically, it is a more sophisticated Dropbox and allows you to keep your code up to date across multiple platforms.
- A complete walk through of Git can be found online at <https://git-scm.com/book/en/v2>.
- Today we will only learn the basics.

Sign up with GitHub

If you don’t already have an account, you will need a GitHub account. You can do so here: <https://github.com/>.

- I’ll wait here while you do this.



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- Once you are finished, come up and enter your username on my computer, this send out an email inviting you to join the class.

Welcome to the class!

- Once you have accepted your invite, you now have access to the coures materials.
- <https://github.com/math-355>
- The page should look something like this. Feel free to poke around.

The screenshot shows a GitHub repository page for 'Math for Machine Learning'. The repository is owned by 'Hamilton' and is described as 'The course files for Math 355'. The email address 'bstone@hamilton.edu' is listed. The repository is public and has a 'Private' label. The repository is titled 'Week01-Intro-to-Git-and-ML' and is described as 'A quick introduction to GitHub'. It has 0 HTML files, 0 stars, 0 forks, and 0 watchers. It was updated 19 hours ago. Below this, there is another repository titled 'Fall-2019-Syllabus' which is also private and described as 'Fall 2019 syllabus for Math 355 Mathematics of Machine Learning.' It has 0 stars, 0 forks, and 0 watchers. It was updated 27 days ago. On the right side of the page, there is a 'Top languages' section showing 'HTML' as the top language. Below that, there is a 'People' section showing a profile picture of a person and an 'Invite someone' button.

Cloning a Repo

First, what is a repo and why would you want to do these things to it? **Repo** is short for repository which is basically a directory of files and folders. Think of your GitHub account as a large folder containing other folders (repos). Each repo is a different project, or in this case, lab. If you just created a GitHub account, then you don't have any repos yet. We are going to change that.

This is where forking comes in. You need to copy the `Lab01-Intro-to-GitHub-Spring-2018` repo into your account. This way you can edit/add files. A **Fork** of a repo is like a fork in a road. There is a main road (the original `Lab01-Intro-to-GitHub-Spring-2018` repo) and a fork off the road (your repo). At any time you are editing the forked repo (or traveling the forked road), you can go back to the original.

Forking the a repo is super easy. All you need to do is click the fork button at the top of this page (<https://github.com/csc-171/Lab01-Intro-to-GitHub-Spring-2018>) and select the account to fork to. **Do this now, then scroll down to this spot on the new page.**

Bam! You have forked a repo! Congratulations. If all went well, you should see something like this at the top of the page:

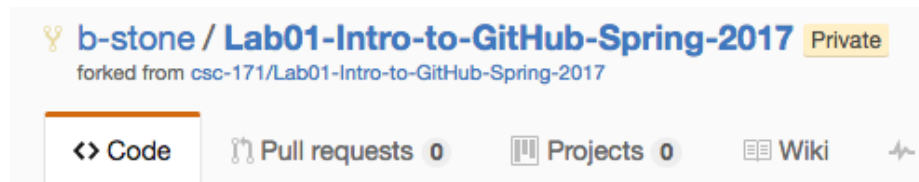


Figure 1: image

The only difference is that your username should be displayed and not `b-stone`. I.e. you should see something like this, `YOURUSERNAME/Lab01-Intro-to-GitHub-Spring-2018`.

From now on, this is the first thing you should do when you start a lab in this class.