

# Tooling/Setup for Professional Python Development

## DS3500: Advanced Programming with Data

### Purpose

The purpose of this first assignment is to get you settled into working in a more professional python development environment, including working with environments, using an IDE, and sharing code with Git. The goals of the assignment are:

- You are up to date with the Anaconda python distribution
- You have a professional IDE such as PyCharm that is tied to the Anaconda base environment
- You are comfortable with navigating the command line and issuing basic git commands

### Overview

**Step 1.** Install the anaconda distribution. If you installed it for DS2500, you are probably all set, though it can be convenient, and save you some downstream headaches if you occasionally delete your anaconda installation folder and do a fresh install. From the terminal, or in Windows, using the Anaconda prompt, running the command **conda info** will report which version you are using. You can update the libraries in your base installation with the command: **conda update --all**

**Step 2.** Install PyCharm. Alternatives are ok, but I will be using PyCharm in class. The free community edition should be fine. You can set yourself up with a JetBrains educational account and get free access to the Professional edition.

**Step 3.** If you aren't already familiar with git, read Pro Git, Chapter 1. (<https://git-scm.com/book/en/v2/>) Install git on your laptop, if you don't already have it already. Section 1.5 gives installation instructions for Linux, macOS, and Windows. You should know, at minimum, the commands: **init**, **clone**, **push**, **pull**, **commit**, **add**, and **status**. It's possible to use the git Desktop, but I think most professional developers prefer using the command line.

**Step 4.** Make sure you have an account on the Khoury Enterprise Git Server (<https://github.khoury.northeastern.edu/>). I believe Khoury students already have an account. If not, you can sign up for an account here: <https://my.khoury.northeastern.edu/account/apply>

While you will use your Khoury account to log into the Git Server, Khoury recently changed the Git Server so that you can no longer use these credentials for authentication when executing git commands. You have two options.

- A) You can set up a temporary personal access token which acts as a command password: <https://github.khoury.northeastern.edu/settings/tokens>

- B) You can set up ssh keys that allow you to authenticate automatically. Go to your profile settings and select **SSH and GPG keys** on the left-hand panel. You'll need to set up and register SSH keys for each device that you use to connect to the git server. On this page you'll find a link to a guide to **generating SSH keys**. YouTube is an excellent resource for help with this sort of thing also!

**Step 5.** Clone the class repo: **ds3500\_sp22** to a location of your choice. I'll be posting class lecture handouts and code samples here.

**Step 6.** Unzip hw/hw0/secret.zip and read the inspiring quote.

### Deliverables

On Gradescope, please report:

- a) Your Khoury enterprise git server username
- b) Your anaconda version
- c) Your installed git version number
- d) The IDE you plan to use, including version number
- e) The text of the inspiring quote.