IS597-MLC – Machine Learning Pipelines Using Cloud-Based Platforms
Instructions for Tool Versions, Installation, and Virtual Environments
Spring 2024
Instructions

Why Are We Installing These Tools?

Most of the work that you will be doing in this semester will be done using the AWS Academy tools. The exception to this general pattern will take place during the Python for Machine Learning Crash Course portion of the course (Weeks 4 and 5). During that portion of the course, you will be using more conventional Python developer tools like Anaconda and PyCharm on your own computer. The following instructions address installing those tools on your computer.

Overview

While setting up your computing environment, you will need to install several software products and do some configuration. We have provided tutorial videos for you to follow when doing those activities. In the videos, we install the version of these tools that we were using when we made the recording. Since you may be taking this course in a later semester, you will need to know which versions to install. This document provides that information.

Installing Anaconda

Follow our tutorial video to install the latest version of Anaconda. If there is any reason in the current semester why you should not install the latest available version, we will provide a warning and instructions on finding the correct version here:

- No problems expected. Install the latest available version.

Updating Anaconda

Your copy of Anaconda may need to be updated. Even when we install Anaconda for the first time, we immediately try to update it. Often, if students are having software problems later in the semester, we will send them back to these instructions and the related tutorial so that they can update their copy of Anaconda. To update Anaconda, follow our tutorial video.

Creating an Anaconda Virtual Environment

Follow our tutorial video to create the Anaconda virtual environment that you will be using for this course. It should have the following name:

- e4_trainor_python_course

Please do not use an alternative name for your virtual environment. Using this exact name makes it easier for us to grade your coding assignment submissions.

In the current semester, these are the packages that you should include in the virtual environment:

- python (3.11)
- jupyter (the Jupyter metapackage)
- numpy
- pandas
- matplotlib
- seaborn

Installing PyCharm Professional

Follow our tutorial video to do the following:

- Get a student license from JetBrains that will allow you to use JetBrains products for free during our course.
- Set up a JetBrains account.
- Install JetBrains Toolbox.
- Install PyCharm Professional.
- Create and configure your first Python project using PyCharm.

Please make sure that you follow the directions in the tutorial video. These include using the JetBrains Toolbox and installing PyCharm Professional. Students in prior semesters have decided that they could skip steps or take alternative approaches. This has led to problems for them that only become apparent later in the semester.

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