DDW GenAI Workshop Prerequisites

These instructions will walk you through setting up the software, files, and account needed for the GenAI hands on lab.

Download and Install Miniconda

Miniconda is a distribution for Python

You may choose to download the full Anaconda distribution if you prefer not to have to download (as many) packages individually later at the expense of disk space.

1. Download the appropriate installer for your platform and operating system from https://docs.anaconda.com/free/miniconda/
    a. For example, for macOS and Apple silicon (i.e. M1, M2), this would be Miniconda3 macOS Apple M1 64-bit pkg
    b. For Windows, this would be Miniconda3 Windows 64-bit
2. Open and run the downloaded installer.

The official instructions are at https://docs.anaconda.com/free/miniconda/miniconda-install/

Download and Install Ollama

Download and unzip and run installer from https://ollama.com/

Or directly from https://ollama.com/download/Ollama-darwin.zip for macOS

Or Windows from https://ollama.com/download/OllamaSetup.exe

For Windows
1. Run the downloaded installer program.

For macOS
1. Go to the Finder
2. Navigate to the folder where you downloaded the file, typically Downloads
3. Unzip the Ollama-darwin.zip
4. Click and drag the Ollama.app file to Applications
5. Open the Ollama.app to run the installer.

In case of problems the documentation for Ollama is available online at https://github.com/ollama/ollama

Download Workshop Materials

Download Workshop Setup Materials ZIP file from here:
https://tinyurl.com/genaiws2024

Setup Python Environment with Conda

macOS: open Terminal
1. With Launchpad:

    a. *Open Launchpad:* Click the Launchpad icon ⬛ in the Dock (or use the Control Strip).
    b. Open the Other application folder.
    c. Find and Click on the Terminal icon to start the Terminal application.

2. With Spotlight:
    a. Hold down the command (⌘) key and press space.
    b. Type "Terminal" into the search box that pops up.
    c. Select "Terminal.app" from the results to start the Terminal application.

Windows: open Command Prompt

1. Open either the Command Prompt (cmd.exe) or PowerShell.
    a. If you are a beginner to the command line, cmd.exe is probably simpler.
2. To open Command Prompt, type "cmd.exe", and select "Command Prompt" app from the results.

Create Conda Environment
Run the following commands in the command prompt or terminal.

First change to the directory you want the new folder to reside in.

MacOS or Linux Terminal
To go to your home folder, use the "cd" command with no arguments, or "cd ~"

    cd ~

On Windows

    Change to your home directory and drive.
    You can do that like this:

    cd %HOMEDRIVE%%HOMEPATH%

1. Move the ZIP file downloaded earlier into your home directory you just created and unzip it.
    a. On windows you can unzip by right clicking the Zip file in the Windows file explorer and selecting "Extract All…"
    b. On macOS just double click the ZIP file in the Finder.

    cd genaiws

Then use this command to create the Conda environment.

    conda env create -n genaiws --file environment.yml

The activate the environment you just created using this command.

    conda activate genaiws

Setup HuggingFace

1. Create a Hugging Face account.

Skip this step if you already have an account.
If you do not have an existing HuggingFace account:
1. Go to https://huggingface.co/ and click the "Sign Up" button (should be in the top right).
2. Enter your email and set a password, then click "Next"
3. Fill in the profile form on the next page then click "Create Account"
4. Complete the security check process to confirm you are a human
5. Check your email for the email confirmation message and click the provided link.

2. Setup Hugging Face Hub API token.

You need to create an API token for accessing HuggingFace Hub APIs from code.

1. Return to https://huggingface.co/ and login if you aren't already
2. Click the avatar icon in the top right to get to the dropdown menu and select "Settings".
3. On the Settings page click "Access Tokens".
4. On the Access Tokens page, click the "New Token" button.
5. Name your token and leave the type as "Read" then click "Generate a token".
6. On the Access Tokens page click the copy icon to the right of your token to copy it to your clipboard.
7. Save your token somewhere safe for use later.

Start Jupyter Lab

NOTE: **start a NEW terminal** or command prompt so that the change to the PATH environment variable made by the Ollama installer takes effect. Otherwise the Ollama commands will not work from the command line or from the jupyter lab server started from the same.

1. Start a new terminal or command prompt.
   a. Refer to earlier instructions if needed.
2. Run "conda activate genaiws" to activate your Conda python environment in the new terminal.
3. Change directories to the genaiws directory, "cd genaiws"
4. Run the command below to start the Jupyter Lab server and open the setup notebook provided in the ZIP file.

jupyter lab ddw_genai_workshop_setup.ipynb

This opens a web browser window for you to the URL http://localhost:8888 where you can use the Jupyter notebook.

Follow the instructions in the notebook to execute the cells which will download the Ollama models, and allow you to verify that everything installed is working correctly.