

Running on Kaggle

Note: Using [Kaggle](#) will let you implement code for the CS 361 final project through your browser instead of having to install stuff on your computer.

1. Download/git clone the [project code](#). The code contains the kaggle/ folder, local/ folder, and the download-data.py script.
2. Run `python3 download-data.py` on the terminal to download the MNIST data needed for part 2. The MNIST_data/ folder should be saved in the same location as the download-data.py file.
3. Create an account on Kaggle (any email works).
4. On Kaggle, click on Notebooks on the left side of the screen. Click `+ New Notebook`. Select language: Python. Select type: Notebook. Ignore advanced settings. Click Create.
5. Go to File -> Upload Notebook. Then upload the Python notebook for part 1 from the kaggle/ folder. Save this notebook by clicking Save Version in the upper right hand corner.
 - a. **Please use the code in the kaggle/ folder, not the local/ folder.**
6. Repeat steps 4-6 for the Python notebook for part 2. You should now have 2 separate notebooks on Kaggle.
7. Open the part 2 notebook on Kaggle. Zip the MNIST_data/ folder. On Kaggle, Click `+ Add Data`. Then click `Upload` on the popup. Enter a dataset title (doesn't matter what title it is). Upload the zipped folder by selecting `Select Files to Upload`. Click `Create`.
 - a. **DO NOT RENAME THE FOLDER BEFORE ZIPPING IT. DO NOT RENAME THE ZIP FILE.**
8. Optional: Click the title of your notebook on the top and rename it so that you can find it later. The title usually looks like *kernel<random characters>*, but rename it so that you can find the notebook more easily next time.

Running Locally

1. Download/git clone the [project code](#). The code contains the kaggle/ folder, local/ folder, and the download-data.py script.
2. Run `python3 download-data.py` on the terminal to download the MNIST data needed for part 2. The MNIST_data/ folder should be saved in the same location as the download-data.py file.
3. Move the MNIST_data/ folder into the local/ folder if you plan on writing and running the code for parts 1 and 2 locally on your own computer. Open any one of the Python notebooks in local/ in Jupyter/Anaconda to start writing code.

Other Things to Note

1. You only need the MNIST_data/ folder for part 2 of the coding portion.
2. If you'd like to move the MNIST_data/ folder to reorganize your folders or simply move it out of the way, note that the Python notebook for part 2 will need to be able to find this folder.

- a. To change where the notebook should look for the MNIST_data/ folder, replace:

```
b. trainset = datasets.MNIST('./MNIST_data', download=False,  
    train=True, transform=transform)  
c. valset = datasets.MNIST('./MNIST_data', download=False,  
    train=False, transform=transform)
```

With

```
d. trainset = datasets.MNIST('<path to MNIST_data/ folder>',  
    download=False, train=True, transform=transform)  
e. valset = datasets.MNIST('<path to MNIST_data/ folder>',  
    download=False, train=False, transform=transform)
```

3. If you are using Kaggle, please use the code in the kaggle/ folder, not the code in local/. The Python notebooks in both local/ and kaggle/ are mostly the same except that the part 2 notebooks in kaggle/ need the datasets to be uploaded to kaggle.