

How to write code in Kaggle for Kaggle Competition

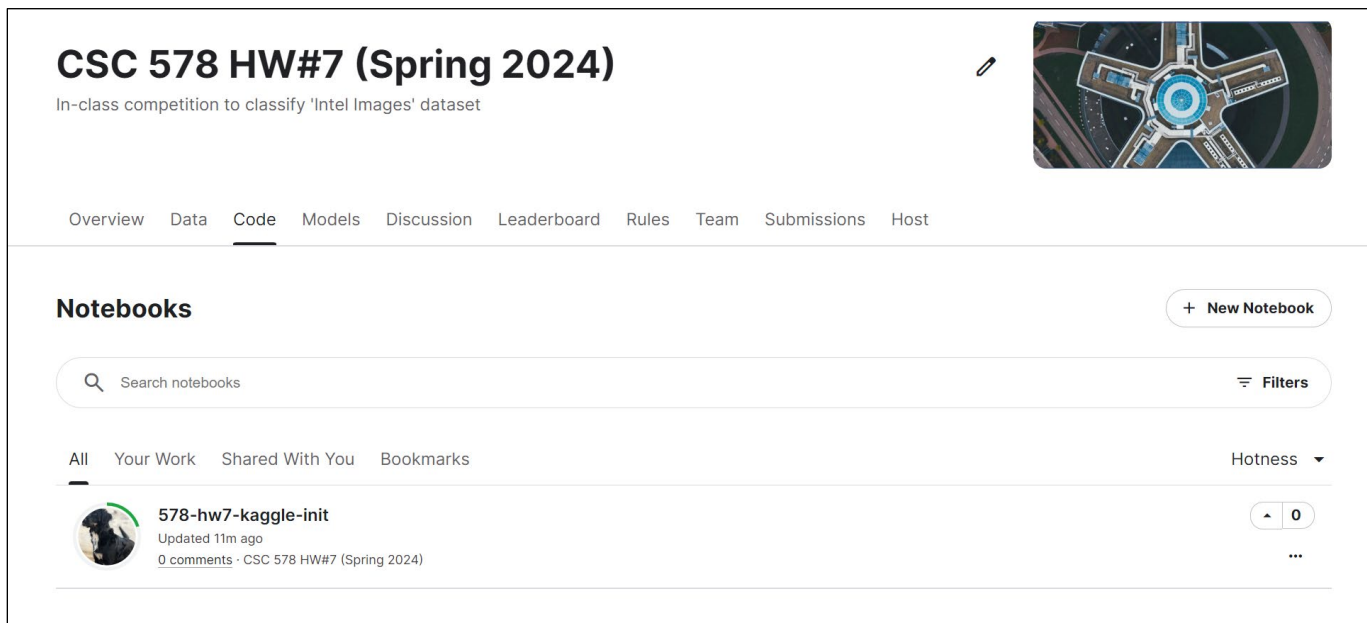
This instruction describes how to write code for our HW#7 In-Class Kaggle Competition, using the Kaggle's development environment.

Step 1: Go to Kaggle.com and create an account on Kaggle (if you don't have one already).

Step 2: Go to the Competition page – “CSC 578 HW#7 (Spring 2024)”
(<https://www.kaggle.com/t/5aee1022db0942818b00a31000c1f09a>).

Step 3: Join the competition. You can click on the button ‘Join Competition’, or you can do so from the invitation email.

Step 4: Click on the ‘Code’ menu at the top. Under the tab ‘All’, you will see an entry ‘578-hw7-kaggle-init’. It is a starter Notebook file. Click on the entry to open the file.



The screenshot shows the Kaggle competition page for "CSC 578 HW#7 (Spring 2024)". The page title is "CSC 578 HW#7 (Spring 2024)" with a subtitle "In-class competition to classify 'Intel Images' dataset". There is a small image of a circuit board. Below the title is a navigation bar with tabs: Overview, Data, Code (selected), Models, Discussion, Leaderboard, Rules, Team, Submissions, and Host. The main content area is titled "Notebooks" and includes a search bar, a "Filters" button, and tabs for "All", "Your Work", "Shared With You", and "Bookmarks". Under the "All" tab, there is a notebook entry titled "578-hw7-kaggle-init" with a profile picture, updated 11m ago, and 0 comments. To the right of the notebook entry is a "Hotness" dropdown menu and a "0" button.

Step 5: In the Notebook page, expand the button with three vertical dots and select ‘Copy & edit notebook’. This will copy the Notebook into your Kaggle account.

Then you see a copy of the Notebook – a Fork -- as your own local copy (created under your Kaggle account).

Fork of 578-hw7-kaggle-i... Draft saved

File Edit View Run Add-ons Help

Share Save Version 0

Run All Markdown

Draft Session off (run a cell to start)

CSC 578 HW#7 Intel Image Classification Competition (Spring 2024)

Name: Jane Doe <== You should replace this with your name

+ Code + Markdown

```
[ ]:
import numpy as np
import tensorflow as tf
from tensorflow import keras
from tensorflow.keras.optimizers import Adam
from tensorflow.keras.layers import Dropout
import matplotlib.pyplot as plt
```

+ Code + Markdown

Load the training data. Split into training 80% and validation 20%.

```
[ ]:
train_directory = '../input/csc-578-hw-7-spring-2024/train'
train_dataset = tf.keras.utils.image_dataset_from_directory(
    train_directory,
    labels='inferred', # use names of subdirectories as target labels
    label_mode='categorical', # convert target class (int) to one-hot-vector
    validation_split=0.2,
```

Input

+ Add Input + Upload

COMPETITIONS

- CSC 578 HW#7 (Spring 2024)
 - test_pred
 - train

Output

- /kaggle/working

Submit to competition

Session options

Schedule a notebook to run

Code Help

Step 6: Rename the file (by editing the cell at the very “Fork of ...”). Then edit the content as you wish to develop code.

Note that, in the right pane, you can expand ‘Input’ and ‘Output’. Input is showing the dataset which is (already) connected to this code (in particular, csc-578-hw-7-spring-2024, which contains two subdirectories ‘test_pred’ and ‘train’). The listing under Output is showing the **file list on your Kaggle account**. This is where any output file, including your submission file (which you will create in the code), will be stored.

Step 7: Create a submission file, by writing a new output file. You can name the file as you wish. Make sure (and wait until) the file shows up under ‘Output’ -> ‘/Kaggle/working’.

Step 8: [from <https://www.kaggle.com/docs/competitions#submitting-predictions>]

To submit a new prediction use the Submit Prediction button. This will open a modal that will allow you to upload your submission file. We will attempt to score this file, then add it to My Submissions once it is done being processed.

Note that to count, your submission must first pass processing. If your submission fails during the processing step, it will not be counted and not receive a score; nor will it count against your daily submission limit. If you encounter problems with your submission file, your best course of action is to ask for advice on the Competition’s discussion forum.