Convolutional Neural Networks for Image Classification

Modify downloaded dataset

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"Cut objects from images to use them for classification. Assemble and save prepared dataset."

Step 1: download code files from Resources

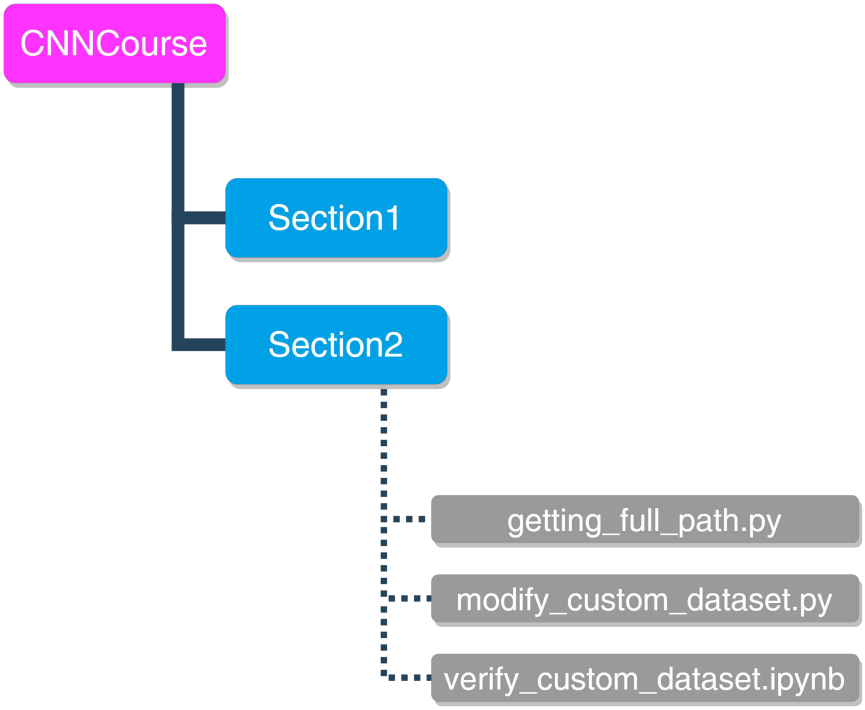
Navigate to *Resources* of the lecture 'Modify downloaded dataset to use it for Classification' and download two *'py'* files and one *'ipynb'* file.

Table 1. Download code files from Resources

Filename	Description
`getting_full_path.py`	Prints full path to the current directory
`modify_custom_dataset.py`	Cuts objects from downloaded images
`verify_custom_dataset.ipynb`	Verifies created custom dataset

Step 2: create new folder

Open *File manager* and create new folder *'Section2'* inside existing folder *'CNNCourse'*. Place downloaded code files into created folder *'Section2'*. You should have following hierarchy.



Step 3: print two full paths

Open *Terminal Window* on Linux system. If you're on macOS, then also open *Terminal*. If you're on Windows, then open *Anaconda Prompt*. All the commands are the same for Linux, macOS and Windows.

Copy code file `getting_full_path.py` into directory with downloaded images from Open Images Dataset.

Table 2. Printing two full paths: to code files and downloaded images

Command	Description
`conda activate cnncpu`	Activates environment with name 'cnncpu'
`cd Downloads/toolkit/OID/Dataset/train/downloaded_dataset`	Activates folder with downloaded images
`python getting_full_path.py`	Prints full path to downloaded images
`cd PycharmProjects/CNNCourse/Section2`	Activates folder with code files
`python getting_full_path.py`	Prints full path to code files

Step 4: run code file ‘modify_custom_dataset.py’

Open *PyCharm* or any other programming environment you have. Copy and paste obtained two full paths into the code. Keep in mind that your full paths might be different. Run the file.

Step 5: run code file ‘verify_custom_dataset.ipynb’

Open *Terminal Window* on Linux system. If you’re on macOS, then also open *Terminal*. If you’re on Windows, then open *Anaconda Prompt*. All the commands are the same for Linux, macOS and Windows.

Table 4. Verify created custom dataset in Jupyter Notebook

Command	Description
`conda activate cnncpu`	Activates environment with name ‘cnncpu’
`jupyter notebook`	Runs Jupyter Notebook

When the browser window is opened, navigate to ‘verify_custom_dataset.ipynb’ file and run all cells.