Course Materials

Machine Learning, Data Science and Generative AI with Python

Welcome to the course!

You're about to learn some highly valuable knowledge, and mess around with a wide variety of data science and machine learning algorithms right on your own desktop! But first, you need to install some stuff.

1. Get the Course Materials

Download all of the scripts and sample data used in this course from this link:

https://github.com/PacktPublishing/Machine-Learning-Data-Science-and-Generative-AI-with-Python

After downloading, decompress this zip file into a folder in a place you'll remember. On Windows, you can right-click and select "expand all" after moving the file where you want it to go. Linux users may use the "unzip" command, and on MacOS you may need to install a separate utility to decompress ZIP archives.

If you want a copy of the slides for this course, you'll find them at https://github.com/PacktPublishing/Machine-Learning-Data-Science-and-Generative-AI-with-Python/blob/main/MLCourseSlides.pdf

2. Install Anaconda

If you'd prefer not to run the course activities on your own PC, we've partnered with Nimblebox.ai to offer a hosted environment you can use (it's not free; a small monthly fee for a developer-level account is involved.) Follow this link for getting started with this course on Nimblebox.

Or, read on to install what you need for free on your own PC instead:

This course requires a scientific Python 3 installation that includes Jupyter notebook support. I use Anaconda; here's how to get set up:

Download and install Anaconda (it's free) at

https://www.anaconda.com/distribution/

Be sure to select a Python 3 version.

Once installed, open an Anaconda command prompt, and install Tensorflow and pydotplus:

```
pip install tensorflow



conda install pydotplus
```

That's it! To see if it works, let's try opening up one of the notebooks included in the course. Let's assume you saved your course materials into the E:\MLCourse directory; we need to launch Jupyter Notebook from the same directory you saved the notebooks to:

```
E:\

cd E:\MLCourse

jupyter notebook
```

And now, you should be able to select a notebook and run it.

3. IMPORTANT TROUBLESHOOTING TIPS

Installing Tensorflow on Anaconda can sometimes be problematic. If you encounter an error during the setup videos during this step, here's one thing to try:

If the setup video directs you to enter

```
conda install tensorflow
```

enter this instead:

```
pip install tensorflow
```

That should install Tensorflow successfully.

If that doesn't work either, try creating a new Anaconda environment for this course, like so:

1. `conda create -n tf tensorflow pydotplus jupyter`
2. `conda activate tf`

You'll need to remember to run "conda activate tf" every time you launch a new Anaconda prompt before starting an exercise in the course. You may find that some packages we assume are present are missing in this new environment you've created; simply install them using "conda install" as needed as you go.