## NATIONAL TECHNICAL UNIVERSITY OF UKRAINE "IGOR SIKORSKY KYIV POLYTECHNIC INSTITUTE"



# Computer Vision

The Programming Assignment | Autumn, 2023





## Getting Started with Deep Learning

"Education is only a ladder to gather fruit from the tree of knowledge, not the fruit itself."

- Albert Einstein (1879 - 1955)

#### Prerequisites:

- 1. An understanding of fundamental programming concepts in Python 3 such as functions, loops, dictionaries, and arrays.
- 2. A familiarity of Pandas datastructures.
- 3. An understanding of how to compute a regression line.

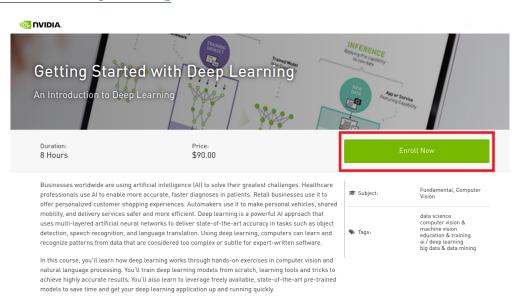
### NVIDIA account

Create an account with your work email address in order to obtain access to the NVIDIA Deep Learning Institute online course for FREE. To do this, follow this link: courses.nvidia.com/join.

## Assignment

Follow the link below and push **Enroll Now** button:

#### Getting Started with Deep Learning



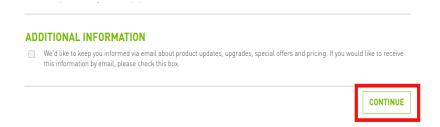
1. Click on **Enter Promo Code** and fill in the field (check with the teacher):

 ${\tt DLITEACHxxxx\_xx\_xxx\_xx}$ 

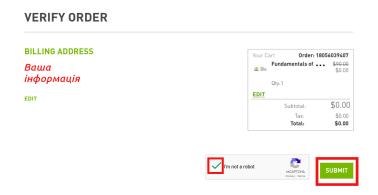
2. Also, fill in the fields that are marked by red colour in the image below:



3. Once you have done that, click on **CONTINUE** button (You will go to the last stage):

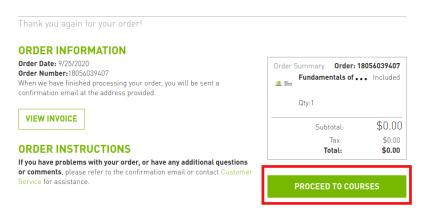


4. Verify order information, check the box next to I'm not a robot and click on  ${f SUBMIT}$  button:



5. To go to the course materials, click on **PROCEED TO COURSES**:

#### ORDER COMPLETED



Upon successful completion of the assessment, you'll receive an NVIDIA DLI certificate to recognize your subject matter competency and support your professional career growth.

#### By participating in this course, you will:

- 1. Learn the fundamental techniques and tools required to train a deep learning model.
- 2. Gain experience with common deep learning data types and model architectures.
- 3. Enhance datasets through data augmentation to improve model accuracy.
- 4. Leverage transfer learning between models to achieve efficient results with less data and computation.
- 5. Build confidence to take on your own project with a modern deep learning framework.

## Evaluation

The programming assignment is worth a total of 10 points.

## Submission

The assignment is considered successfully completed and credited to the maximum score (10 points), if you finished it before the deadline and received a certificate. To confirm the successful completion of the assessment, please, upload your certificate in the .pdf<sup>1</sup> format at https://cloud.comsys.kpi.ua/s/g3TFqQHcD6t4Pse

Please, give the name to the certificate file in this format: First name Last Name\_Group.pdf

**Deadline:** due at 11:59 PM, Dec 15

<sup>&</sup>lt;sup>1</sup>To do that, please, hit in your browser: Ctrl + P