Building Transformer-Based Natural Language Processing Applications (BNLPA)

ID BNLPA **Price** CHF 995.—(excl. VAT) **Duration** 1 days

This course is part of the following Certifications

NVIDIA-Certified Associate: Generative AI LLMs (NCA-GENL)
NVIDIA-Certified Associate: Generative AI Multimodal (NCA-GENM)

Prerequisites

- Experience with Python coding and use of library functions and parameters
- Fundamental understanding of a deep learning framework such as TensorFlow, PyTorch, or Keras
- Basic understanding of neural networks

Course Objectives

- How transformers are used as the basic building blocks of modern LLMs for NLP applications
- How self-supervision improves upon the transformer architecture in BERT, Megatron, and other LLM variants for superior NLP results
- How to leverage pretrained, modern LLM models to solve multiple NLP tasks such as text classification, named-entity recognition (NER), and question answering
- Leverage pre-trained, modern NLP models to solve multiple tasks such as text classification, NER, and question answering
- Manage inference challenges and deploy refined models for live applications

Course Content

Introduction

- Meet the instructor.
- Create an account at courses.nvidia.com/join

Introduction to Transformers

- Explore how the transformer architecture works in detail:
- Build the transformer architecture in PyTorch.
- Calculate the self-attention matrix.
- Translate English to German with a pretrained transformer model.

Self-Supervision, BERT, and Beyond

Learn how to apply self-supervised transformer-based models to concrete NLP tasks using NVIDIA NeMo:

- Build a text classification project to classify abstracts.
- Build a NER project to identify disease names in text.
- Improve project accuracy with domain-specific models.

Inference and Deployment for NLP

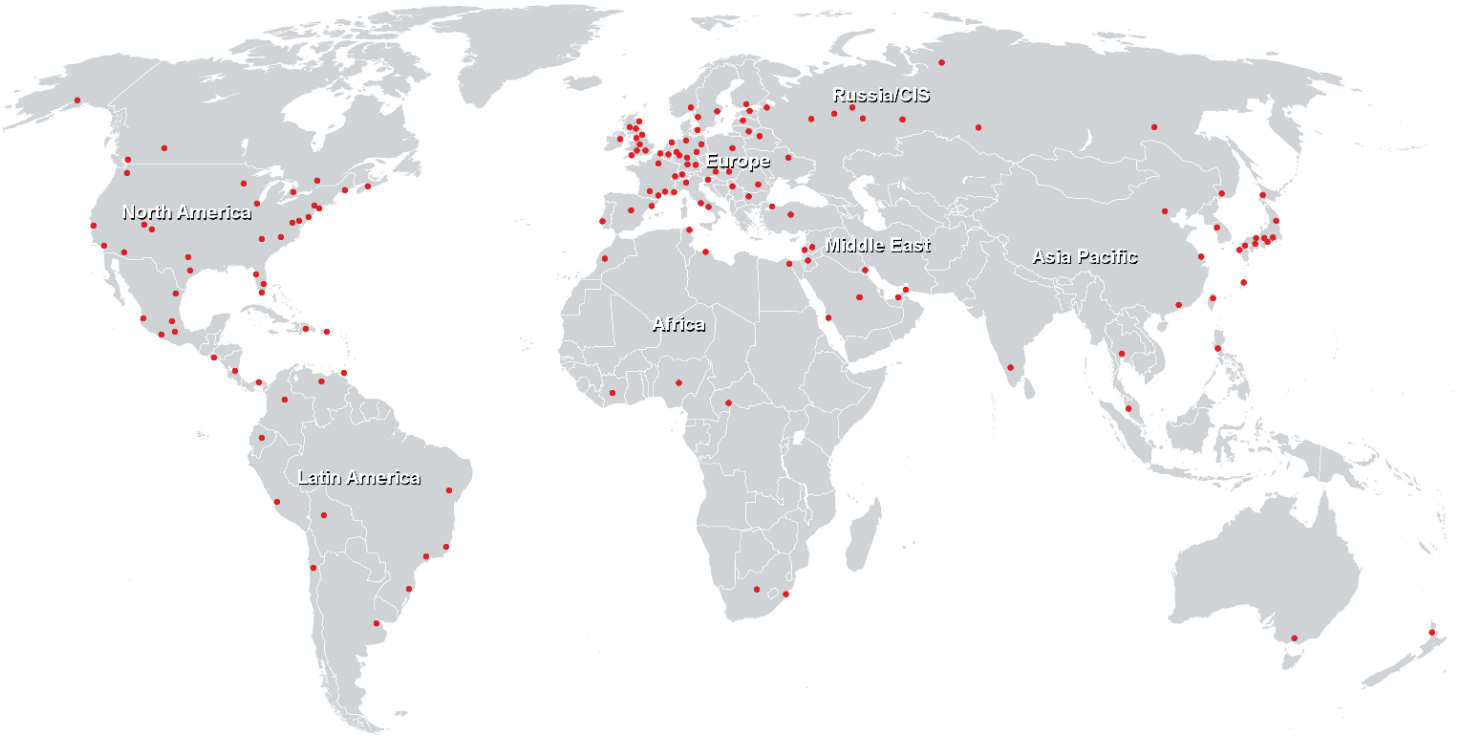
- Learn how to deploy an NLP project for live inference on NVIDIA Triton:
- Prepare the model for deployment.
- Optimize the model with NVIDIA® TensorRT™.
- Deploy the model and test it.

Final Review

- Review key learnings and answer questions.
- Complete the assessment and earn a certificate.
- Take the workshop survey.
- Learn how to set up your own environment and discuss additional resources and training.

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Training Centres worldwide





Fast Lane Institute for Knowledge Transfer (Switzerland) AG

Husacherstrasse 3
CH-8304 Wallisellen
Tel. +41 44 832 50 80

info@flane.ch, https://www.flane.ch