



## Fundamentals of Deep Learning for Natural Language Processing 2.0

This workshop teaches you to apply deep learning techniques for understanding textual input using Natural Language Processing (NLP) through a series of hands-on exercises. You will work with widely-used deep learning tools, frameworks, and workflows by performing neural network training on a fully-configured GPU accelerated workstation in the cloud. The course starts with the technique of training a neural network for text classification followed by building a linguistic style model to extract features from a given text documents and concludes with a neural machine translation model for translating one language to another

Duration	8.5 hours		
Price	\$10000 for groups of up to 20 people		
	(includes dedicated access during the course to a fully-configured GPU accelerated workstation in the cloud for each student)		
Certification	Upon successful completion of this workshop, you will receive NVIDIA DLI Certification to prove subject matter competency and support professional career growth		
Prerequisites	Basic experience with Neural Networks and python programming , familiarity with		
	linguistics		
Languages	English		
Tools, Libraries, and Frameworks	Tensorflow, Keras		

## **Learning Objectives**

At the conclusion of the workshop, you will have an understanding of :

- Convert text to machine understandable representation and classical approaches
- Implement distributed representations (embeddings) and understand their properties
- Train Machine Translators from one language to another

## Why Deep Learning Institute Hands-on Training?

- Learn how to build deep learning and accelerated computing applications across a wide range of industry segments such as Autonomous Vehicles, Digital Content Creation, Finance, Game Development, and Healthcare
- Obtain guided hands-on experience using the most widely used, industry-standard software, tools, and frameworks
- Attain real world expertise through content designed in collaboration with industry leaders such as the Children's Hospital of Los Angeles, Mayo Clinic, and PwC
- Earn NVIDIA DLI Certification to prove your subject matter competency and support professional career growth
- Access content anywhere, anytime with a fully configured GPU-accelerated workstation in the cloud



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## **Content Outline**

	Components	Description
Overview of	<ul> <li>Importance of data</li> </ul>	Overview of the challenges in NLP and how to
Natural	representation for computers	tackle them using Deep learning
Language	to understand language	
Processing		
(45 mins)		
Break		
(15 mins)		
Word	<ul> <li>Overview of Word2Vec</li> </ul>	We will cover distributed data representations
Embeddings	algorithm for text classification	such as word embeddings using the Word2Vec
(120 mins)		algorithm .The word embeddings once trained
		can be used for variety of problems including
		text classification.
Dreek		
Break (60 mins)		
(00 mms)	<ul> <li>Building a linguistic style model</li> </ul>	Text classification will be used to figure out the
Classification	to extract features from given	authors of some unknown set of documents. The
(120 mins)	set of texts using embeddings	text-classification model is then used to identify
( /		the right author for a given text document .
Break		
(15 mins)		
Text	Create a neural machine	Learn the basic technique to translate human
Translation	translation model to translate	readable text to machine readable format.we
(120 mins)	text from one language to	will teach to use attention mechanism to
	another	improve results, especially long strings.
Closing	Wrap-up with the potential next	Quick overview of the next -steps you could
comments and	steps and Q&A	leverage to build and deploy your own
questions		applications and any Q&A
(15 mins)		