

NLP and Transformer Models

What is NLP?



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NLP

NATURAL

LANGUAGE

PROCESSING



NLP

NLP stands for Natural Language Processing and is the art of making a computer understand written language, and possibly act upon it.



Old NLP Paradigm



Core Problems



Language changes



Dimensionality



Similarities between words



**In this course, we will learn how
Transformers revolutionized
NLP with the help of self-
attention and the Transformer
architecture.**



Introducing Globomantics Case Study

Globomantics Needs



Add Translation to support customers from all over the world in English.



Add Summarization to avoid the agents having to type the summary of each call or interaction.



Getting The Best Out Of This Course



Prerequisites

Prerequisites

- Basic TensorFlow
- Basic Python
- Basic Deep Learning and NLP experience

Course Suggestions

- Core Python 3.6: Getting Started
- TensorFlow Developer Certificate – Natural Language Processing (NLP)



More Resources

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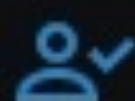
Author's nest



Author kit



Axel Sirota 
Pluralsight Author



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GitHub Repository for the Course

 axel-sirota	add all	429f0d2 11 hours ago	 4 commits
 module3	add all		11 hours ago
 module4	add all		11 hours ago
 .gitignore	module 3 demos		3 days ago
 LICENSE	Initial commit		4 days ago
 README.md	Initial commit		4 days ago
 requirements.txt	add structure		2 days ago
 workspace.yml	module 3 demos		3 days ago

<https://github.com/axel-sirota/nlp-and-transformers/>



Version Check



Version Check



Python 3.9

Tensorflow 2.9

Keras 2.9



Version Check



This course is 100% applicable to:

- Python 3.7 to Python 3.10
- Tensorflow 2.0 to Tensorflow 2.9
- Keras 2.0 to Keras 2.9

<https://www.tensorflow.org/guide/versions>



Version Check



This course is partially applicable to:

- Python 3.6 to Python 3.7
- Tensorflow 1.13 to Tensorflow 2.0



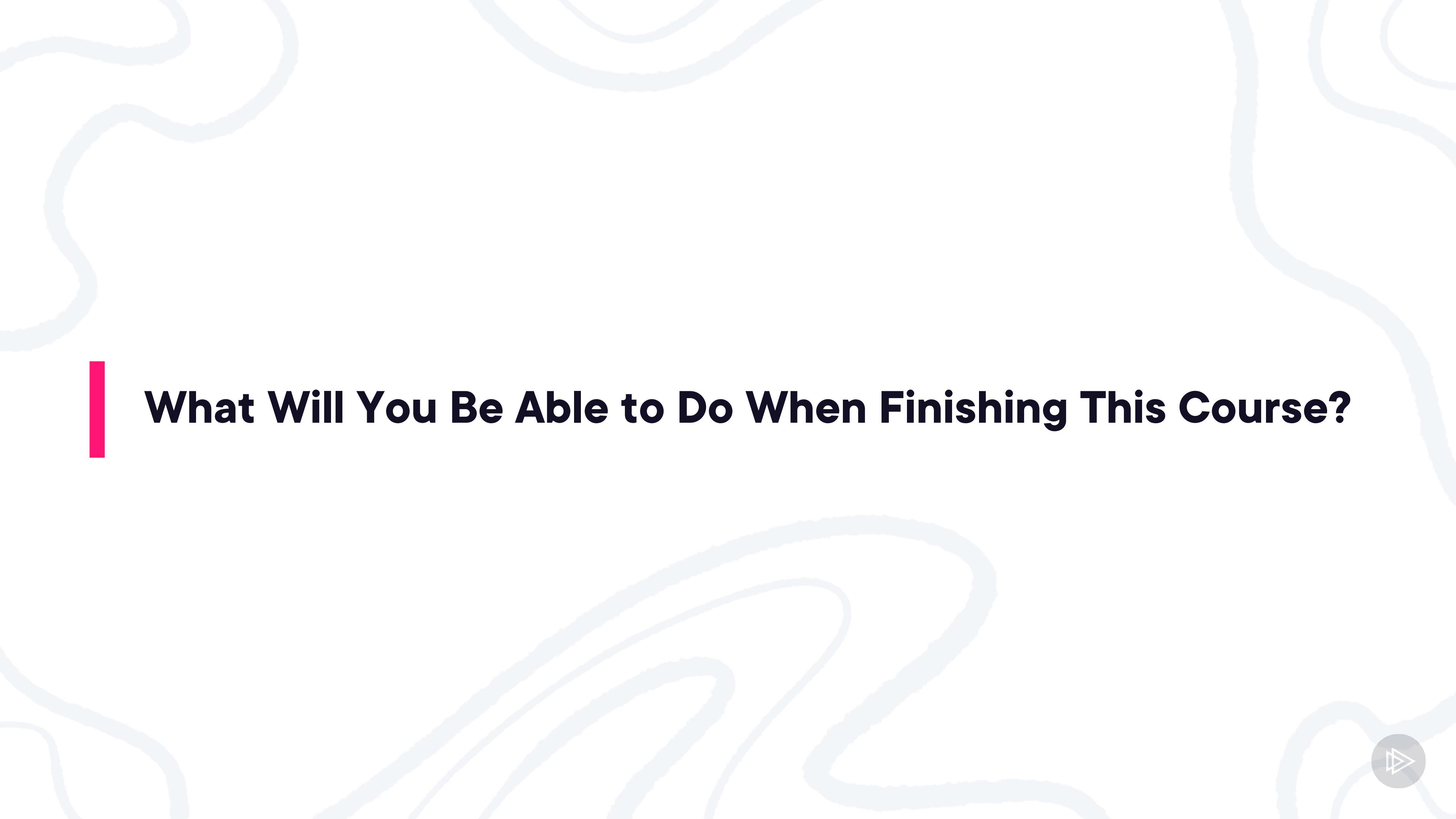
Version Check



This course is NOT applicable to:

- Python 3.5 or below
- Tensorflow strictly below 1.12

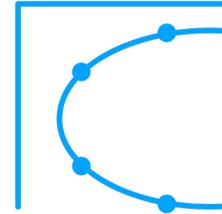




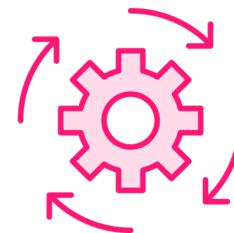
What Will You Be Able to Do When Finishing This Course?



Things You Be Able To Do:



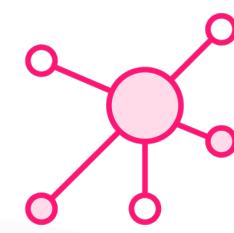
Use pretrained word embeddings as input to your models and finetune it



**Process your text to transform it form raw format into a usable tensor.
Trust me, this skill is often overlooked**



Understand why Transformers work



Use Different transformer networks on each task to perform the expected result



Outline Of The Course



How Attention Works

Use Hugging Face

How Transformers work

Build one from scratch

Final thoughts

Key Takeaways

