

TensorFlow Developer Certificate - Natural language processing (NLP)

Why Process Text?



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NLP

NATURAL
LANGUAGE
PROCESSING



Old NLP Paradigm



Core Problems

1ST

Language changes

Core Problems



Language changes



Dimensionality

Core Problems



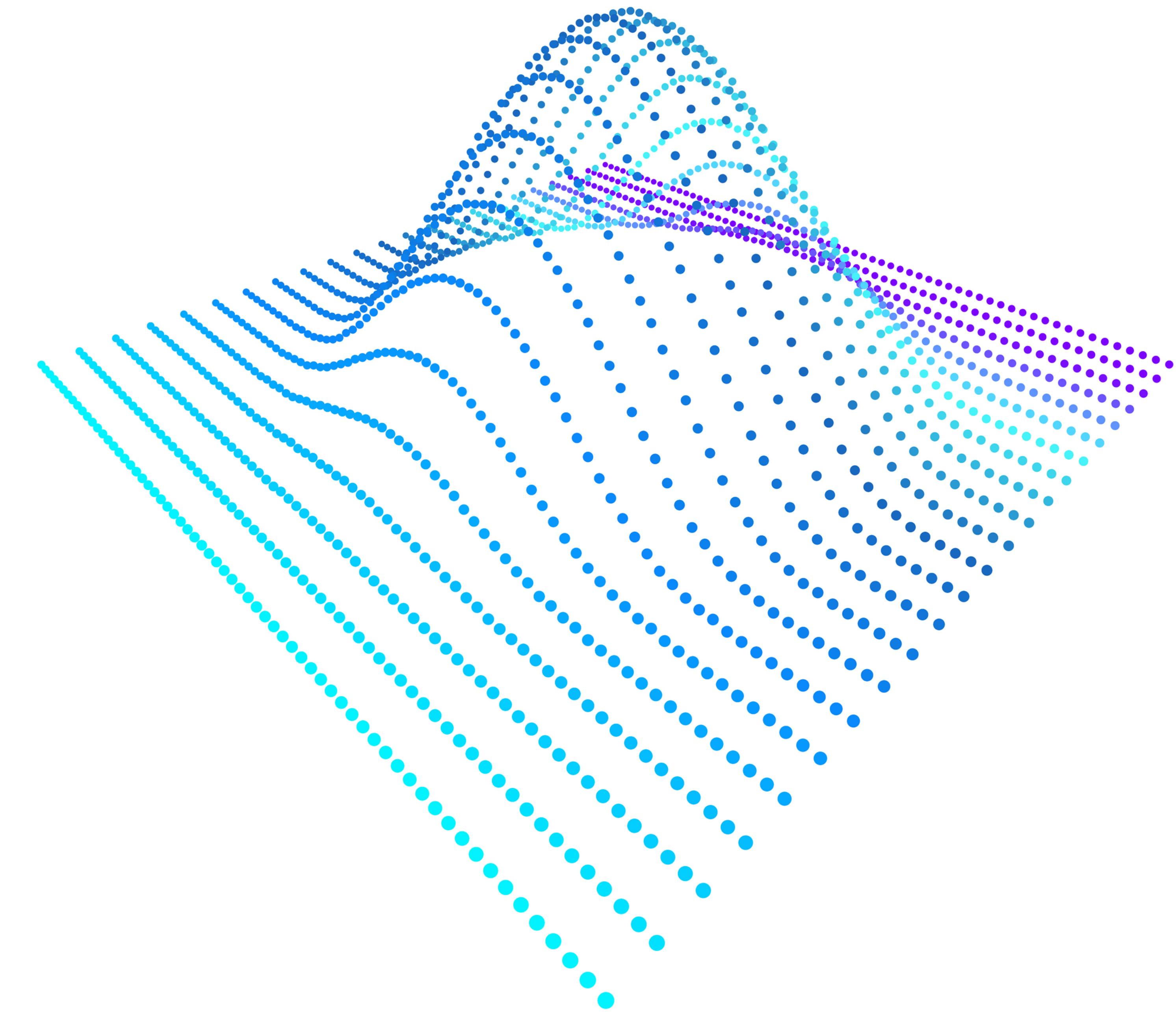
Language changes



Dimensionality



Similarities between words



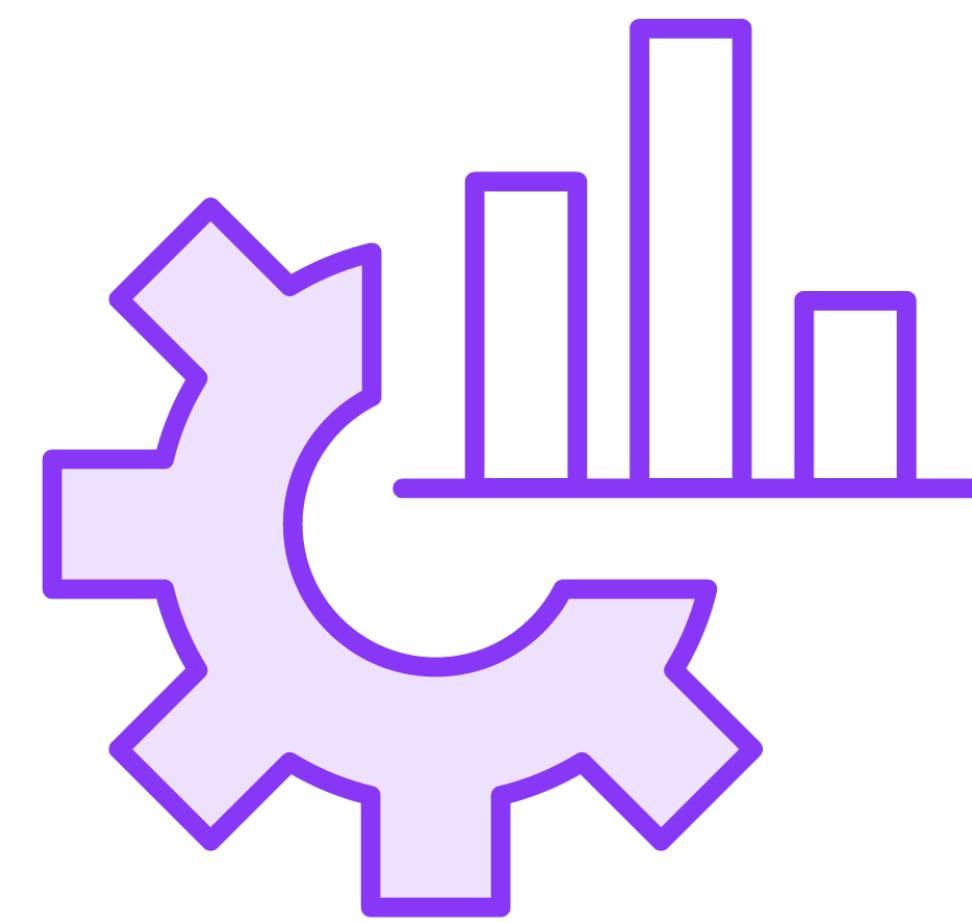


Introducing Globomantics Case Study

Globomantics Needs



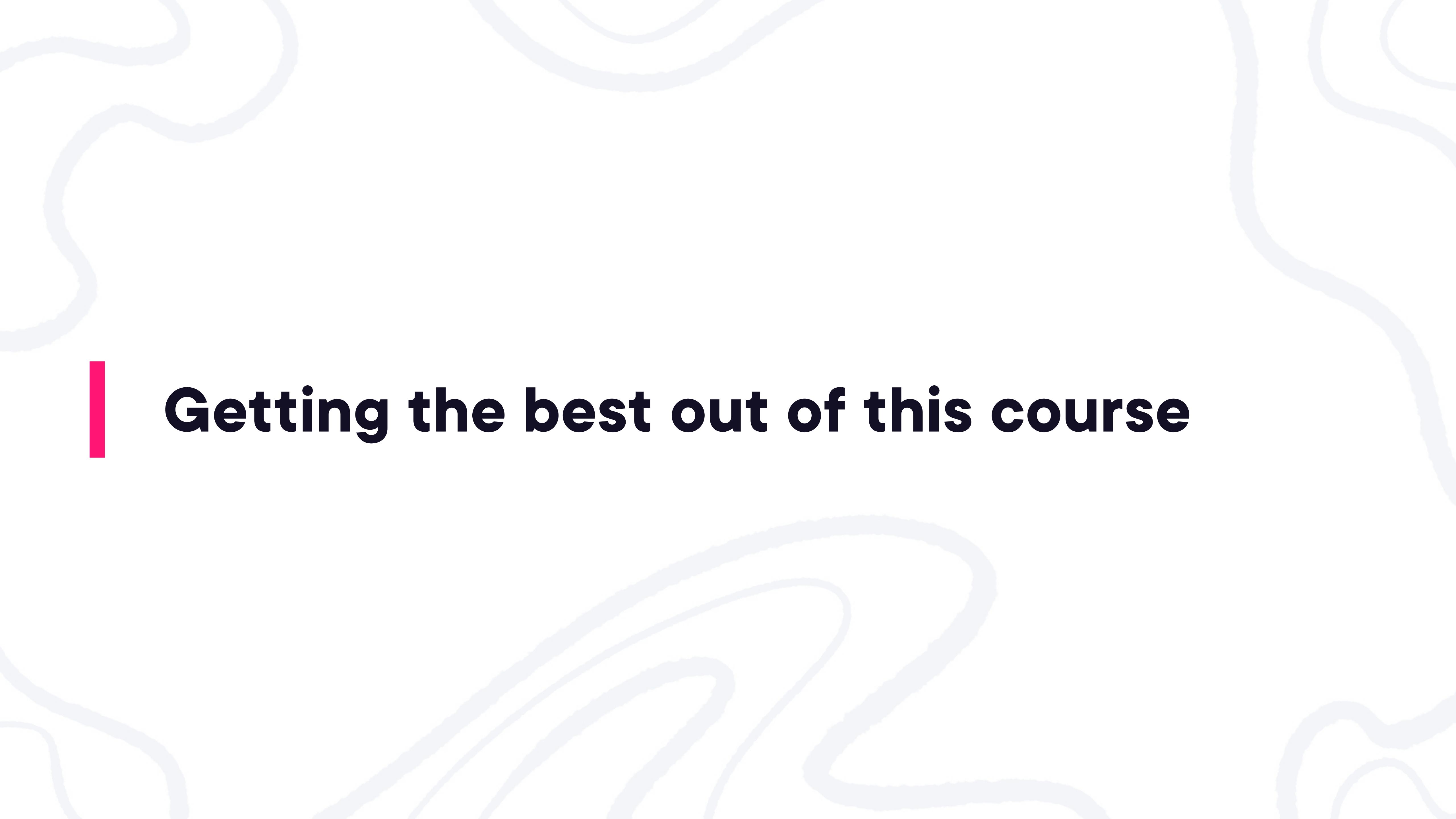
**Detect sentiment out of
any incoming message**



**Correctly detect the
intention of a user**



**Provide helpful
suggestions**



Getting the best out of this course

Prerequisites

Prerequisites

- Basics of Machine Learning
- Basics of Tensorflow 2 and Keras 2
- Basic Python

Course Suggestions

- Core Python 3.6: Getting Started
 - TensorFlow Developer: Getting started with TensorFlow 2.9

Not Needed

- NLP

More Resources

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SKILLS



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Analytics

Author's nest

Author kit



Axel Sirota

Pluralsight Author



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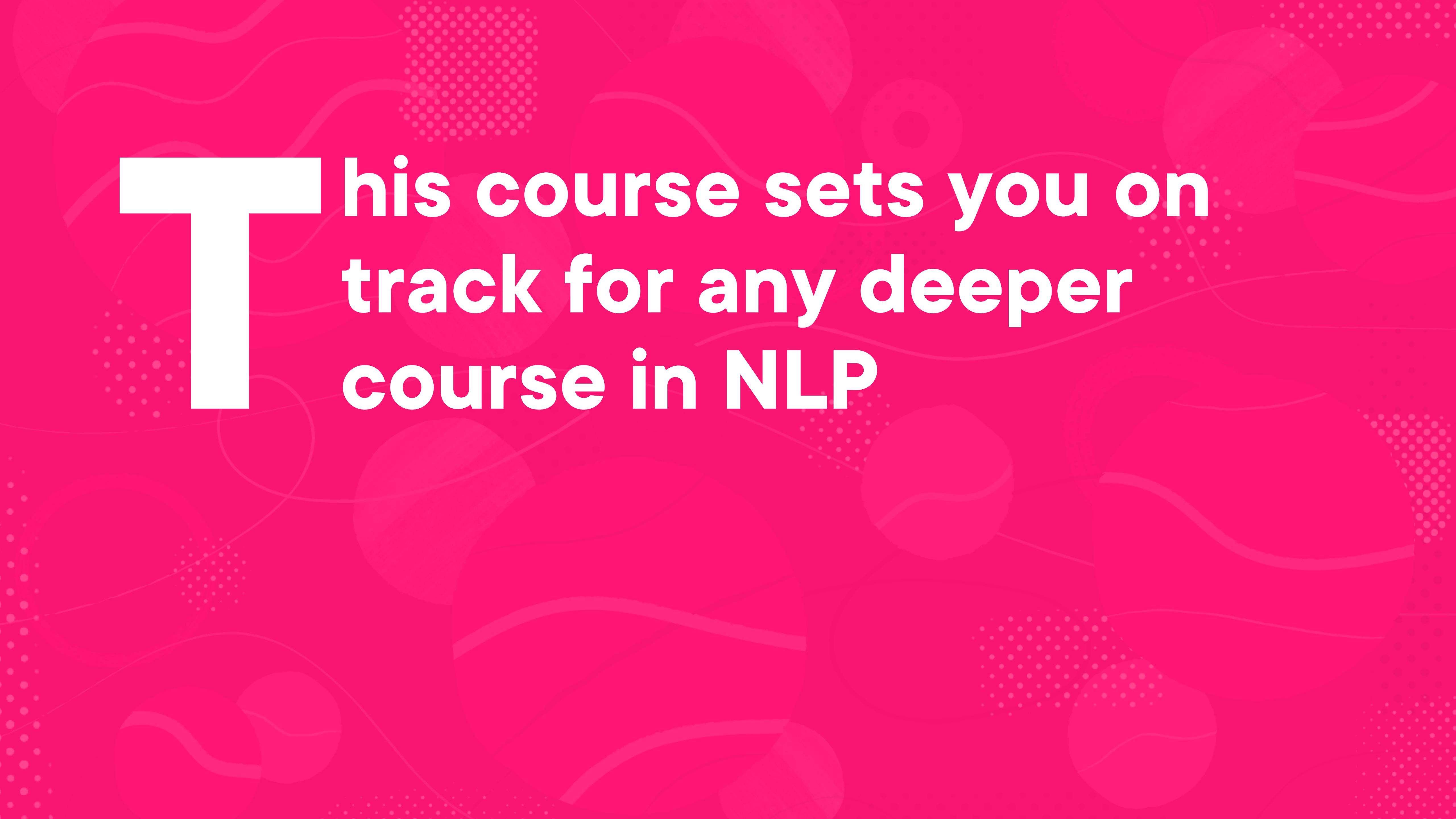
Ask me on twitter

@AxelSirota

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/tf-dev-nlp>



This course sets you on
track for any deeper
course in NLP



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/>

Version Check

This course is partially applicable to:

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

Version Check

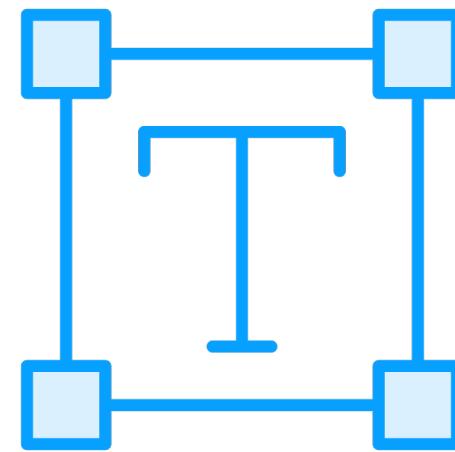
This course is NOT applicable to:

- Python 3.5 or below
- Tensorflow strictly below 1.12



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

Things You Will Be Able to Do



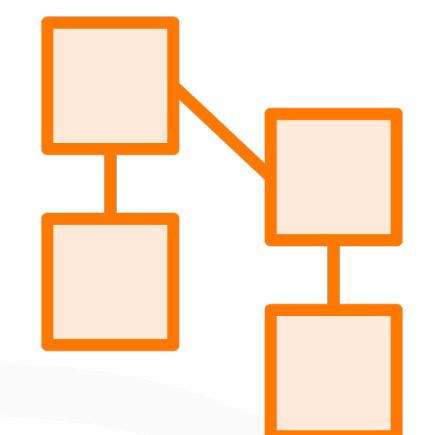
Use pretrained word embeddings as input to your models and finetune it



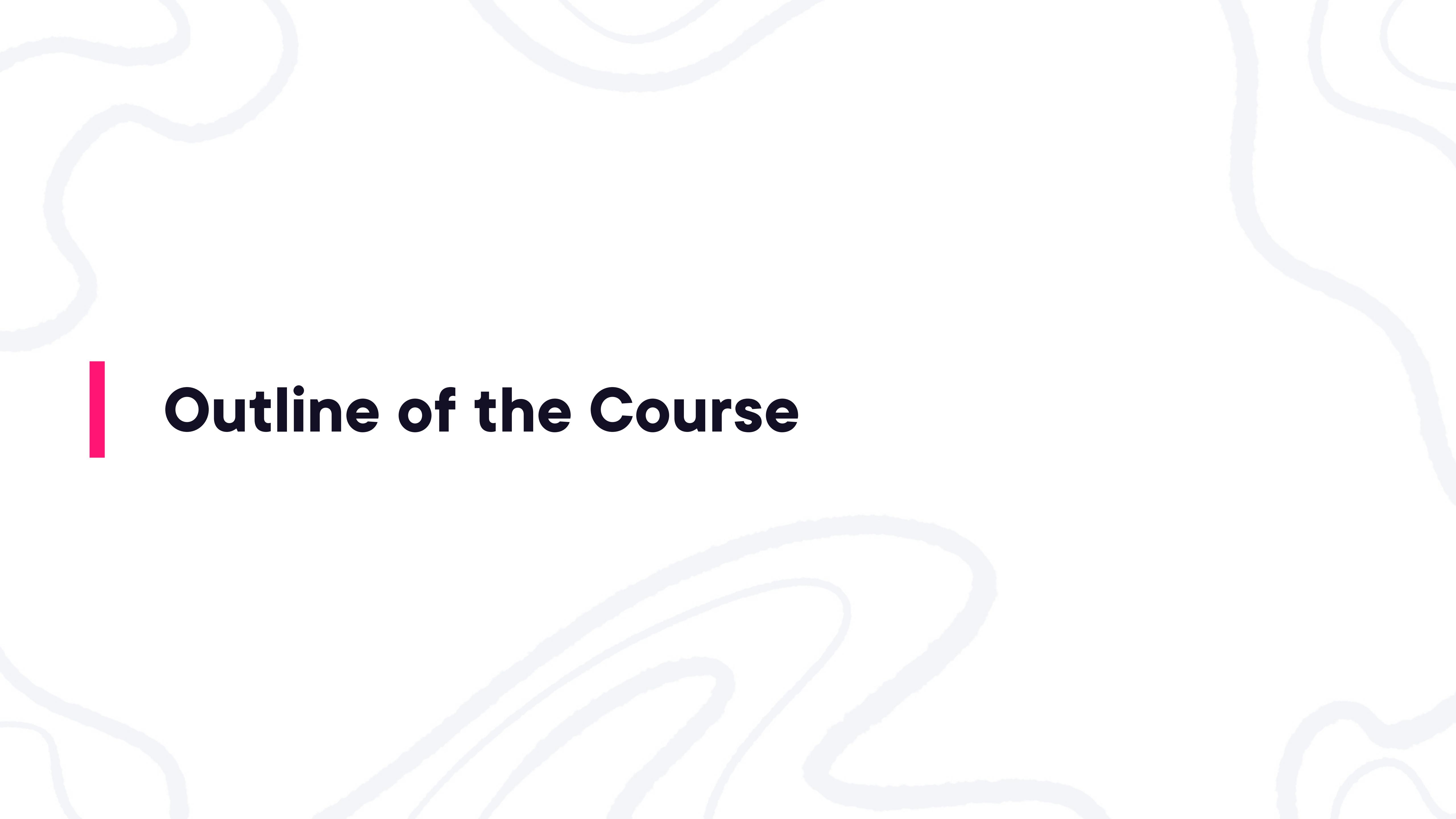
Process your text to transform it from raw format into a usable tensor



Perform text classification on any set of labels



Create generative models with RNNs



Outline of the Course

Using Word Embeddings

Predict Sentiment with OHE

Word2Vec

Use GloVe vectors

Helping Users with Text Generation

RNNs, GRUs and LSTM

Text Generation

Classifying Intention From Text

Feed forward Networks and Softmax
Intent Classification

Final thoughts

Key Takeaways