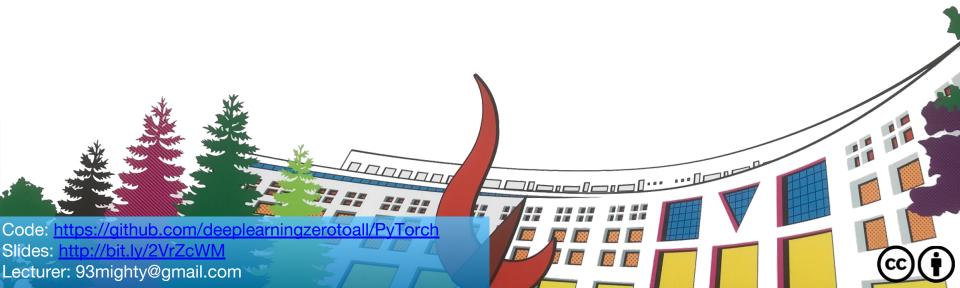
# ML/DL for Everyone Season2

with PYTORCH

**PackedSequence** 

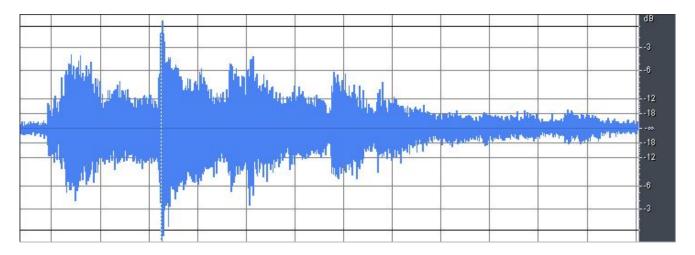


#### **PackedSequence**

- Examples of sequential data
- How do we make a batch with multiple sequence sizes?
  - Padding Method
  - Packing Method
- PyTorch Library Functions
  - pad sequence
  - pack\_sequence
  - pad\_packed\_sequence
  - pack\_padded\_sequence

#### Sequential data

- Text
  - "The quick brown fox jumps over the lazy dog"
- Audio



## **Example data**

Н	Е	L	L	0	<space></space>	W	0	R	L	D		
М	l	D	N	l	G	Н	Т					
С	Α	L	С	U	L	Α	Т	l	0	N		
Р	Α	Т	Н									
S	Н	0	R	Т	<space></space>	С	l	R	С	U	l	Т

## **Padding Method**

Н	Е	L	L	0	<space></space>	W	0	R	L	D	<pad></pad>	<pad></pad>
М	l	D	N	I	G	Н	Т	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>
С	Α	L	С	U	L	Α	Т	l	0	N	<pad></pad>	<pad></pad>
Р	А	Т	Н	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>	<pad></pad>
S	Н	0	R	Т	<space></space>	С	l	R	С	U	I	Т

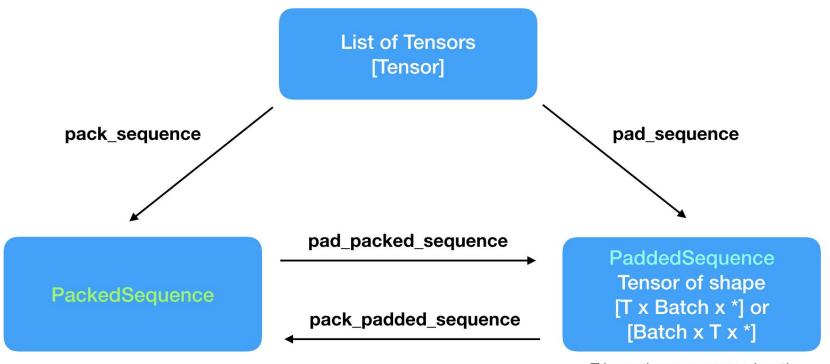
## **Packing Method**

Н	Е	L	L	0	<space></space>	W	0	R	L	D		
М	l	D	N	l	G	Н	Т					
С	Α	L	С	U	L	Α	Т	I	0	N		
Р	Α	Т	Н									
S	Н	0	R	Т	<space></space>	С	ı	R	С	U	I	Т

## **Packing Method**

S	Н	0	R	Т	<space></space>	С	I	R	С	U	I	Т
Н	Е	L	L	0	<space></space>	W	0	R	L	D		
С	Α	L	С	U	L	Α	Т	I	0	N		
М	l	D	N	I	G	Н	T					
Р	Α	Т	Н									

#### **PyTorch Library Functions**



**T** is maximum sequence length

#### What's Next?

- How do we implement PackedSequence?
- How does PackedSequence work?