# Using the Transformer

# BERT-based architectures


## Learning goals

- Understand the developments of the post-BERT era
- Get to know different self-supervised objectives
- Understand how to tackle BERTs critical shortcomings

# SUCCESSORS OF BERT

## October 2018 - BERT

BERT (**Devlin et al., 2018**) is a bidirectional contextual embedding model purely relying on Self-Attention by using multiple **Transformer encoder** blocks.

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**10/2018**

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## February 2019 - GPT2

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### June 2019 - XLNet

**Yang et al., 2019** design a new pre-training objective in order to overcome some weaknesses they spotted in the one used by BERT.

The use **Permutation Language Modelling** to avoid the discrepancy between pre-training and fine-tuning introduced by the artificial MASK token.


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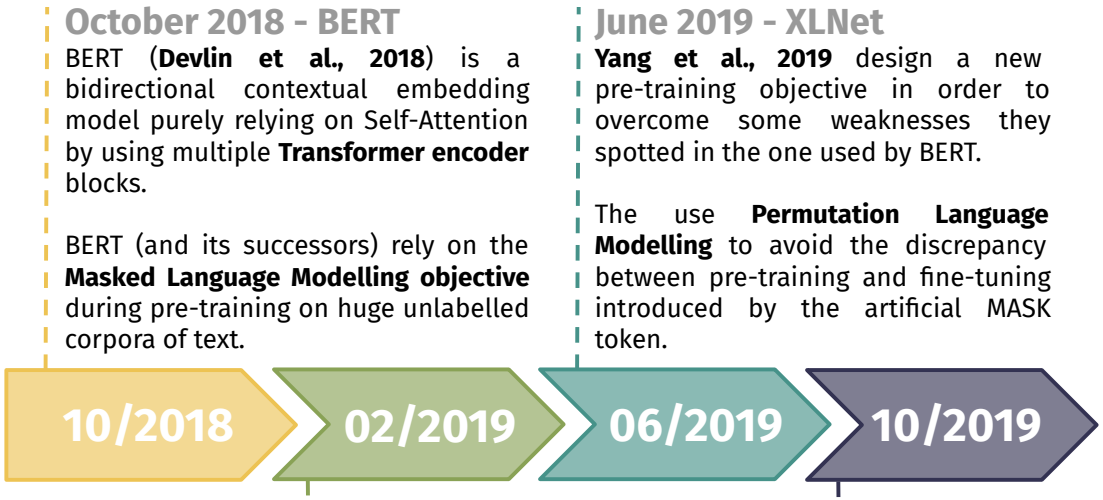

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