Tied Transformers

NMT with Shared Encoder - Decoder

https://taoqin.github.io/papers/tiedT.AAAI2019.pdf

What are transformers?

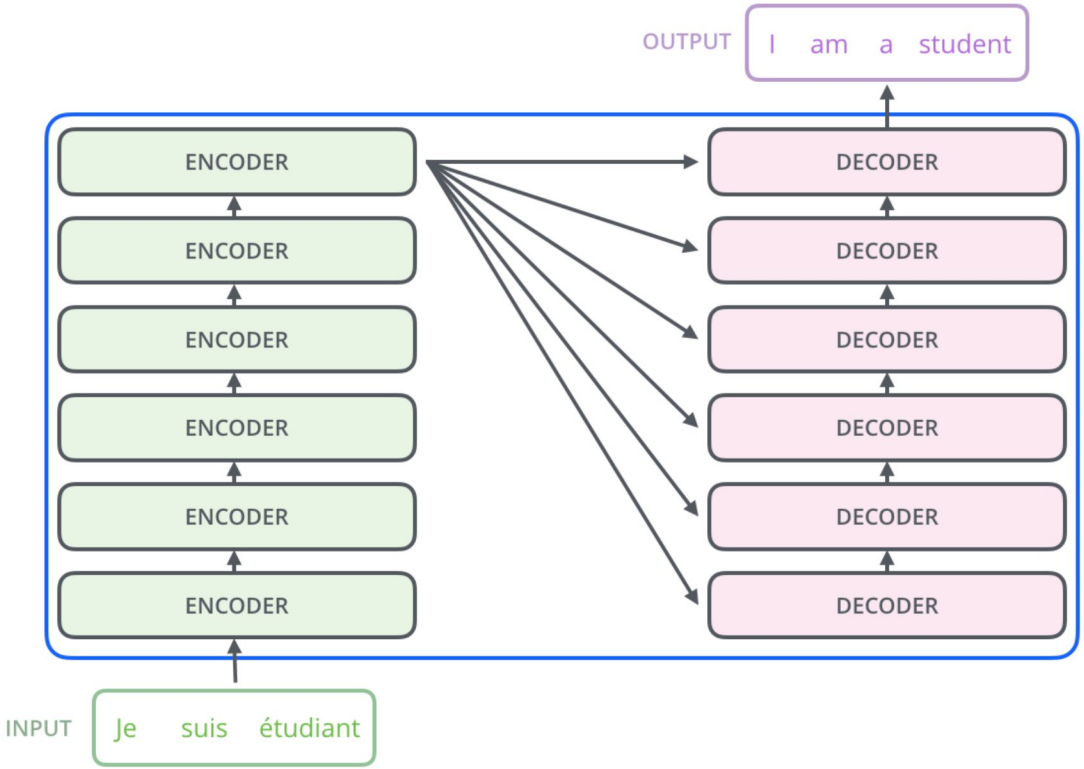
A new **Non-recurrent** approach for modeling natural language.

Previous contenders:

- LSTMs with attention
- CNNs with attention

Simple Example: What if we had none of the above and we wanted to build a model for a NLP task? e.g. sentiment.

What are transformers?



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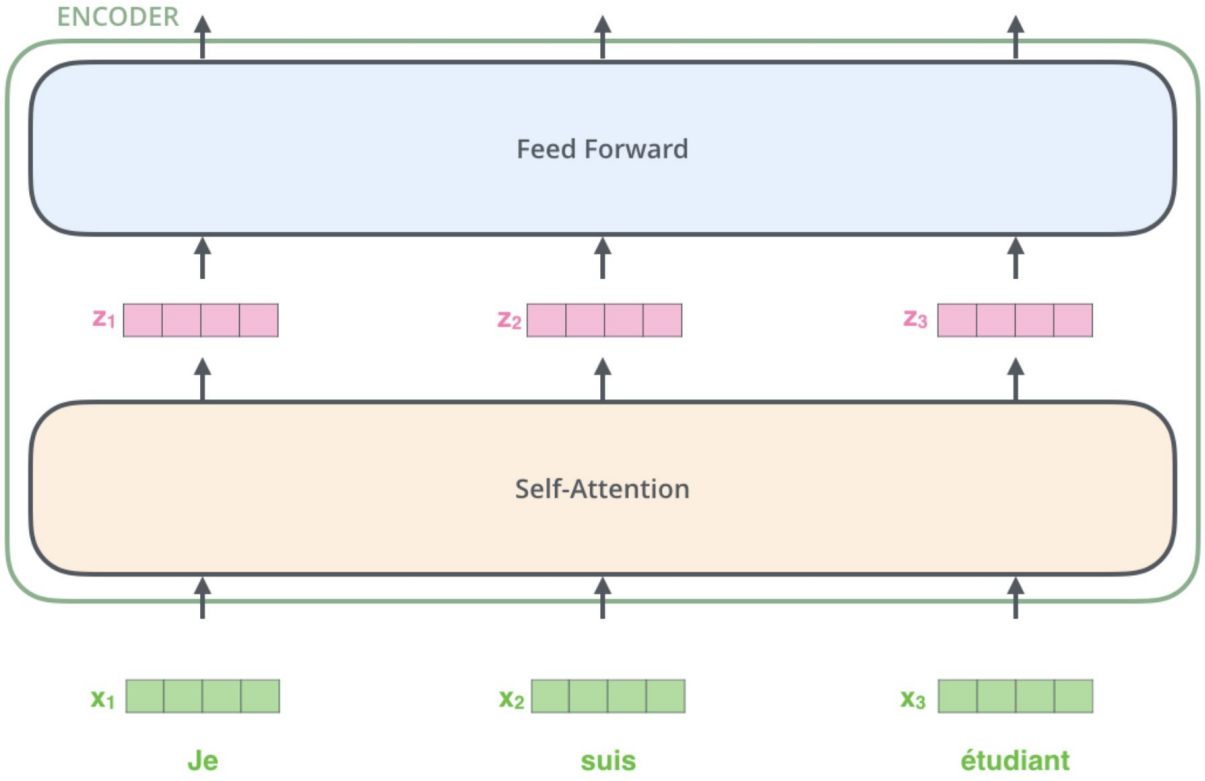

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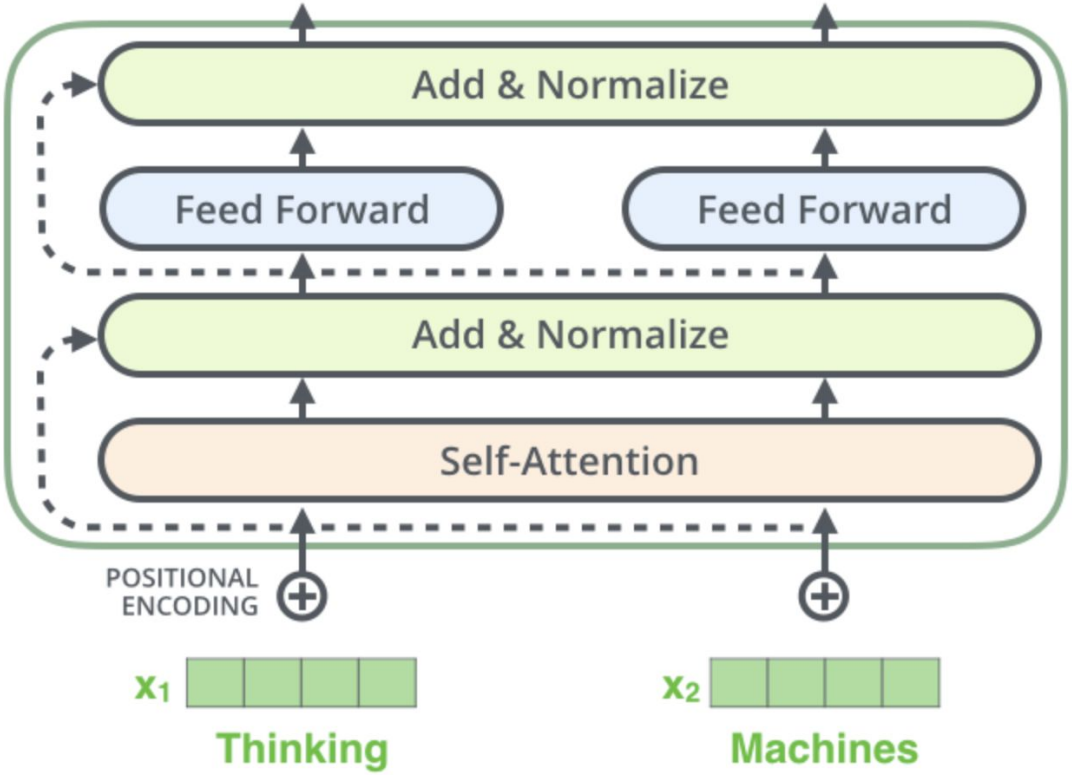

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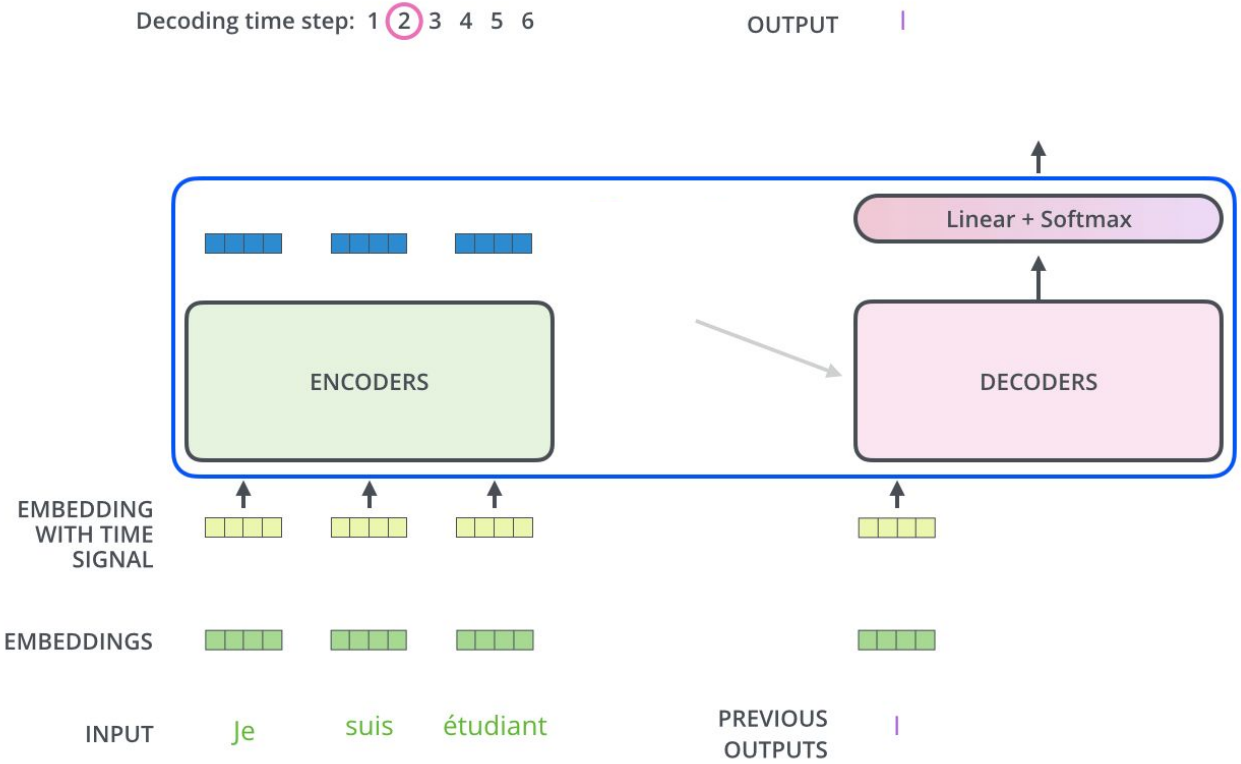

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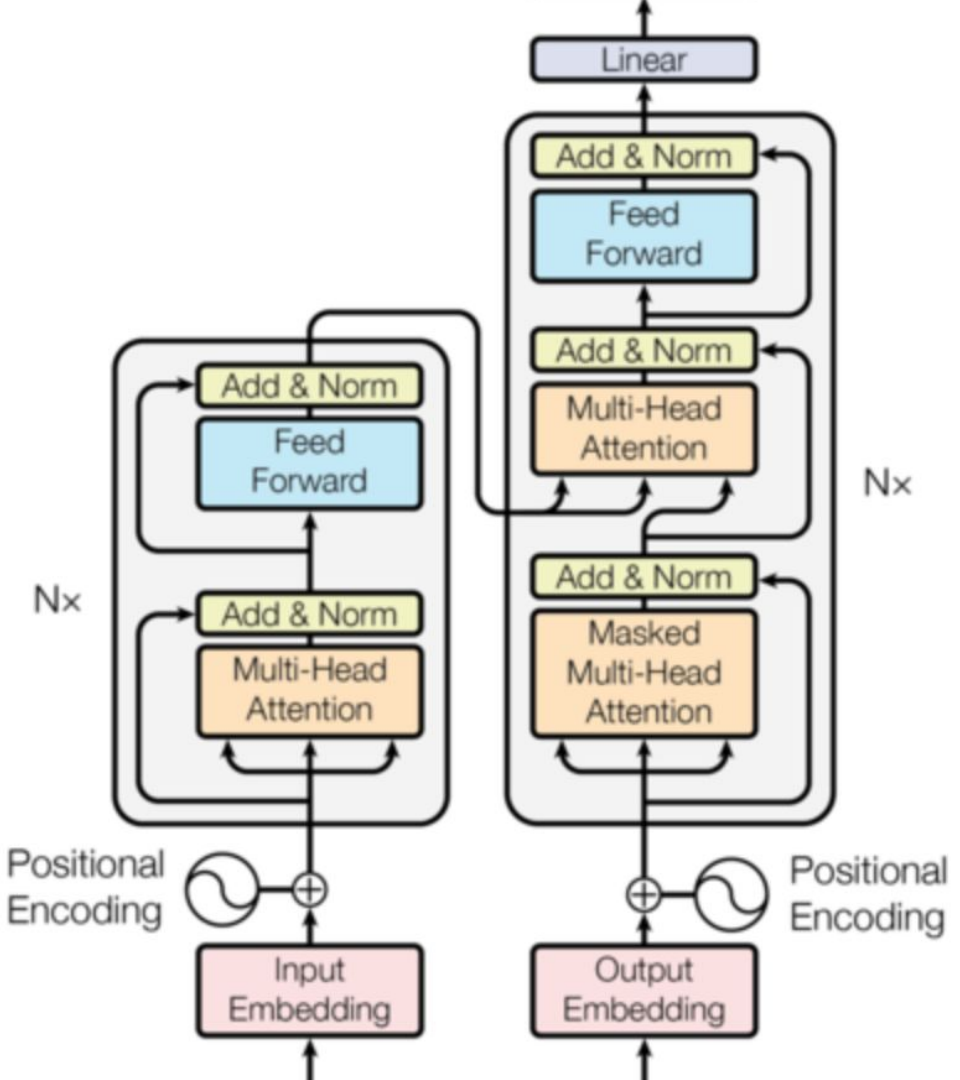


Tied transformers?

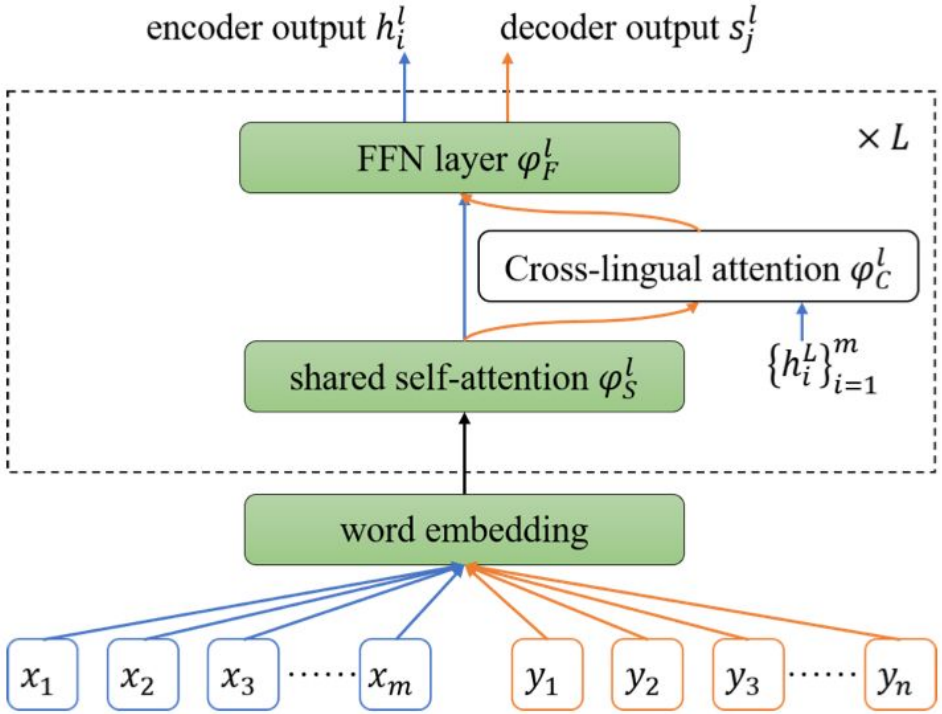
Sharing weights between encoders and decoders has been used in the past. e.g. tied autoencoders.

In MT => both languages follow similar semantics - hence sharing components between the two networks may not be a bad idea, even though lexical differences exist.

Sharing the self-attention component:

> For example, if looking at “The Cat” then decoder should also look at the same concepts in the target language.

Tied transformers?



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Let’s discuss datasets and their paper in detail ...