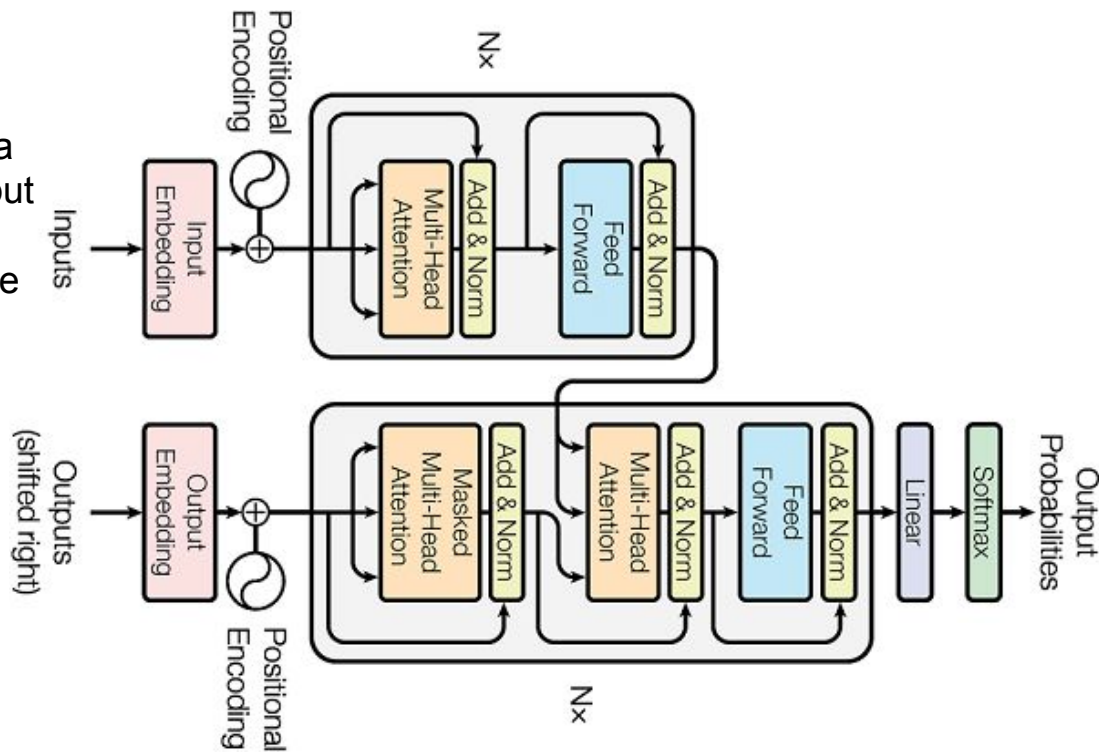# Recurrent Decoder

Explained

Traditional Decoder

Marco is using a
sentence as input
and he wants a
shorter sentence
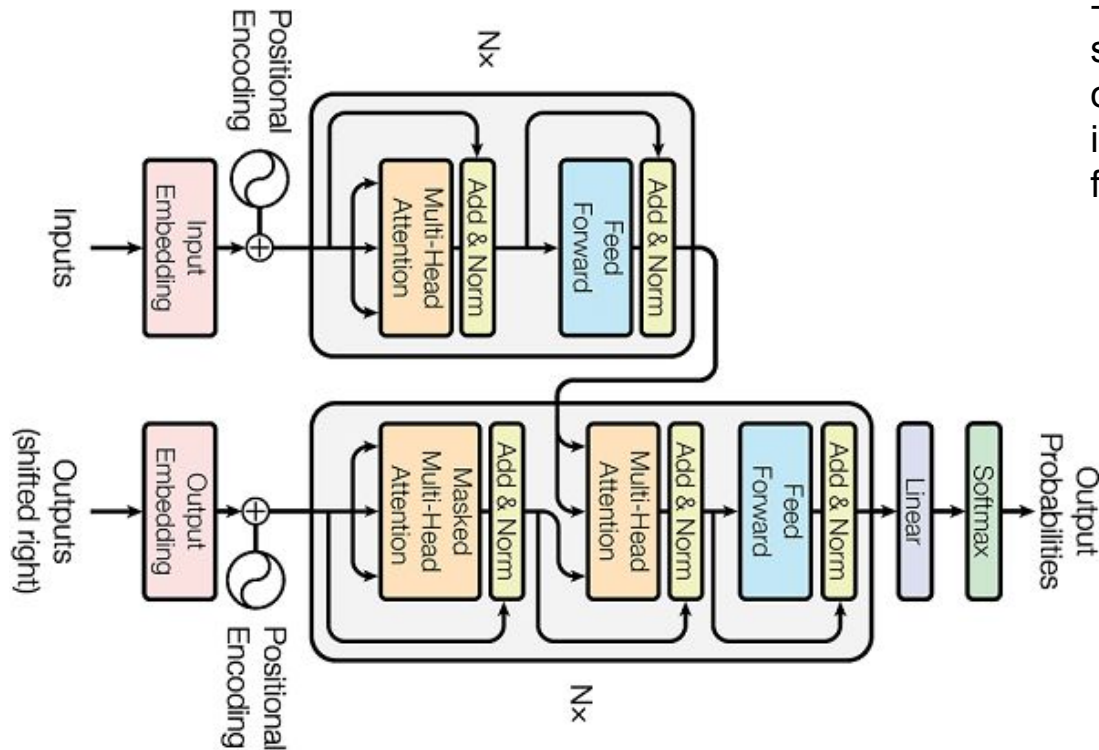as output.

1. <BoS>
2. <BoS> Marco
3. <BoS> Marco
   _is
4. <BoS> Marco
   _is
   _summarizing
5. <BoS> Marco
   _is
   _summarizing.

1. Marco
2. _is
3. _summarizing
4. .
5. <EoS>

Traditional Decoder if Sentence Too Long

Marco is using a
long sentence as
input and he
wants a shorter
----
sentence as
output. But the
input is too big to
fit into the model.

Marco is using a
long sentence as
input and he
wants a shorter

1. <BoS>
2. <BoS> Marco
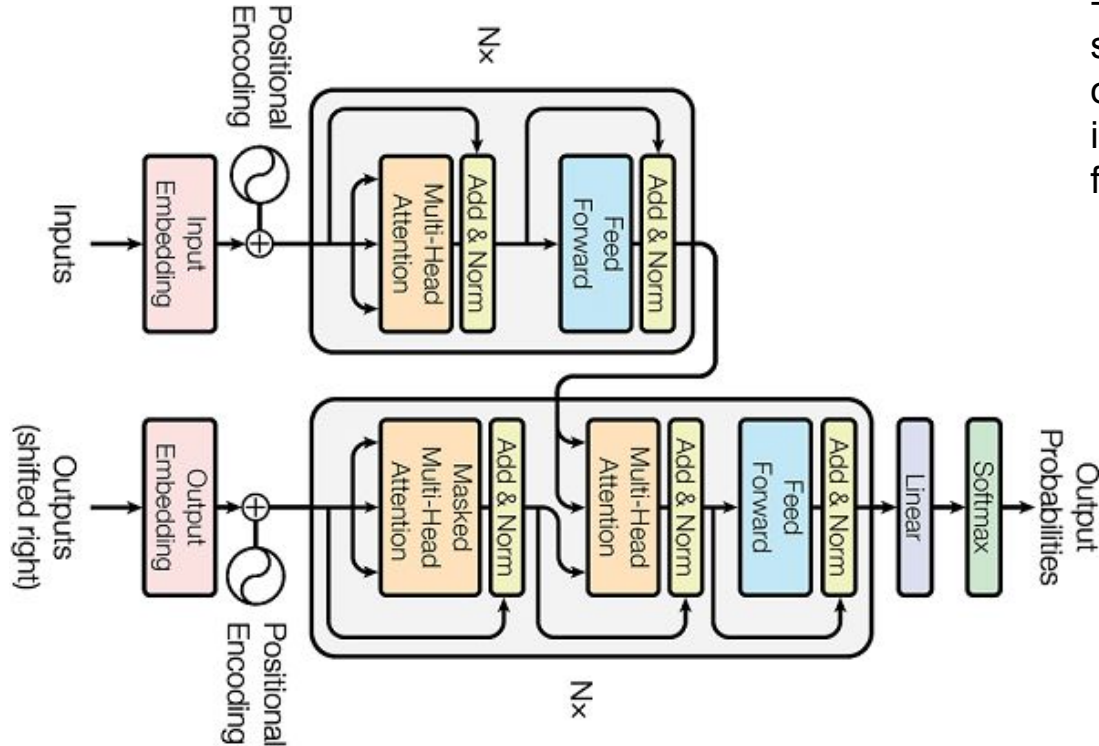3. <BoS> Marco
   _is
4. <BoS> Marco
   _is
   _summarizing

1. Marco
2. _is
3. _summarizing
4. <EoS>

Traditional Decoder if Sentence Too Long

Marco is using a long sentence as input and he wants a shorter

----

sentence as output. But the input is too big to fit into the model.

sentence as output. But the input is too big to fit into the model.

1. <BoS>
2. <BoS> Input
3. <BoS> Input _too
4. <BoS> Input _too _long
5. <BoS> Input _too _long.

1. Input
2. _too
3. _long
4. .
5. <EoS>

Recurrent Decoder if Sentence Too Long

Marco is using a
long sentence as
input and he
wants a shorter

1. <BoS>
2. <BoS> Marco
3. <BoS> Marco
   _is
4. <BoS> Marco
   _is
   _summarizing

Marco is using a
long sentence as
input and he
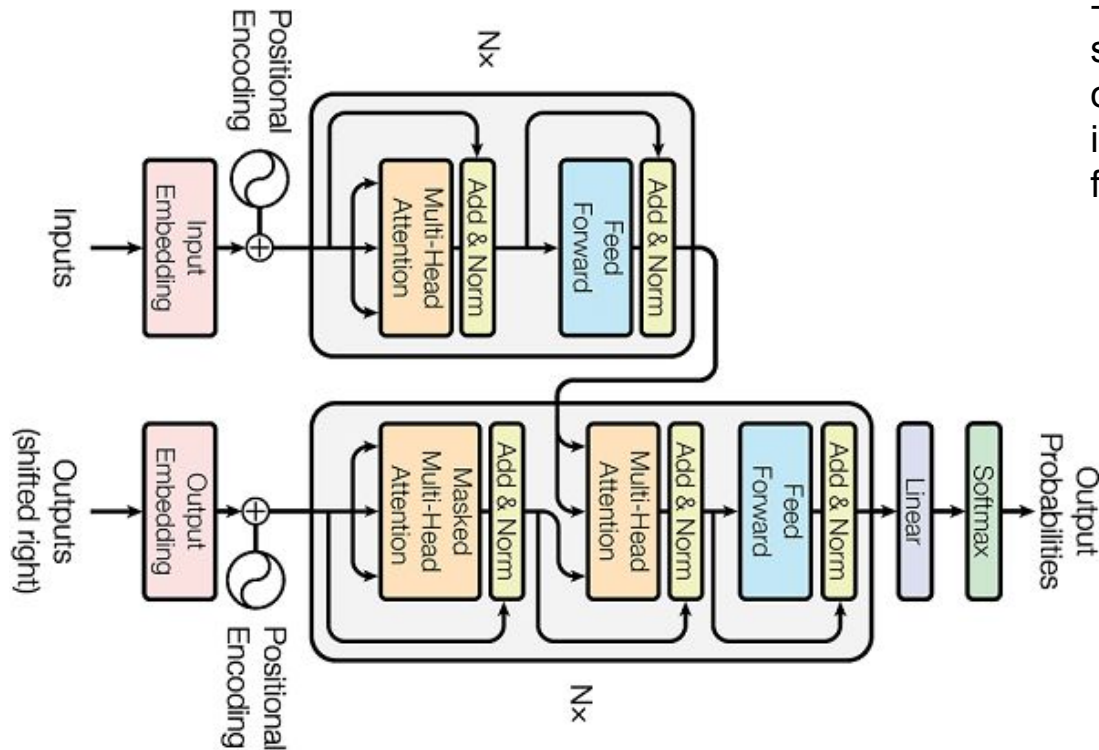wants a shorter
----
sentence as
output. But the
input is too big to
fit into the model.

1. Marco
2. _is
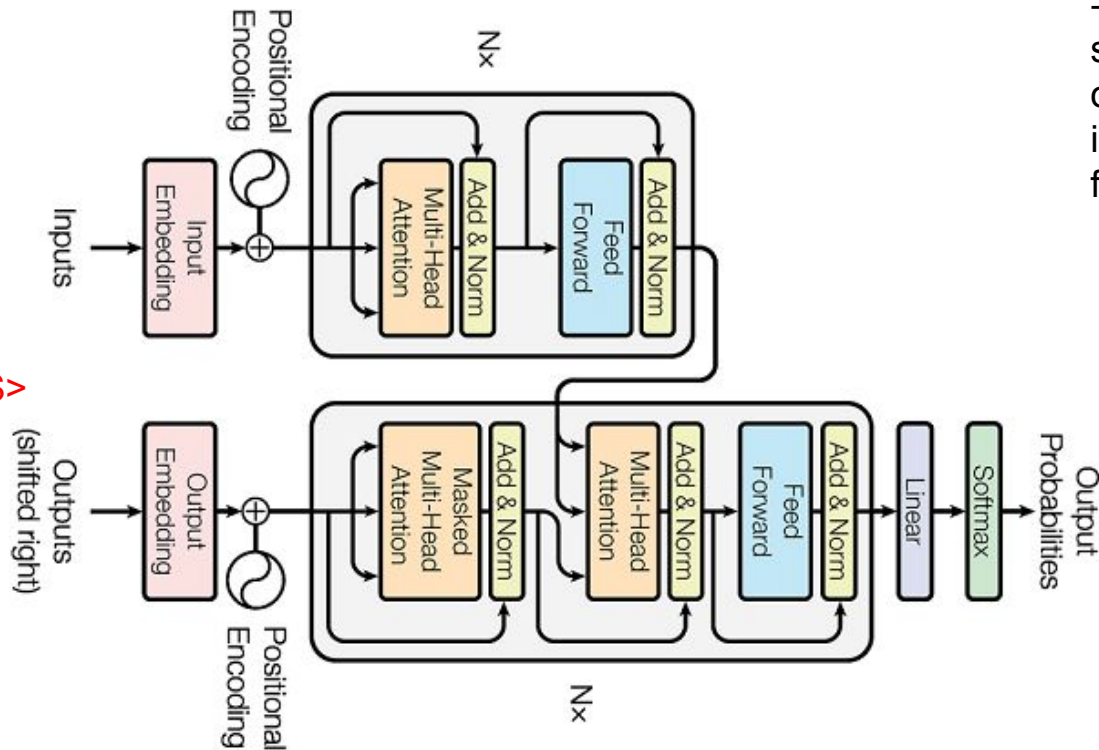3. _summarizing
4. <EoS>

Recurrent Decoder if Sentence Too Long

Marco is using a long sentence as input and he wants a shorter
----
sentence as output. But the input is too big to fit into the model.

sentence as output. But the input is too big to fit into the model.

First we remove <EoS>

1. <BoS> Marco _is _summarizing
2. <BoS> Marco _is _summarizing,
3. etc...

1. ,
2. _input
3. _too
4. _long
5. .
6. <EoS>

Traditional vs Recurrent Decoder if Input Too Long

Marco is using a long sentence as input and he wants a shorter

----

sentence as output. But the input is too big to fit into the model.

Traditional

Recurrent

Marco is summarizing input too long.

Marco is summarizing, input too long.