

NEURAL MACHINE TRANSLATION SYSTEMS

ABSTRACT

Methods, systems, and apparatus, including computer programs encoded on computer storage media, for neural machine translation. One of the systems includes an encoder neural network comprising: an input forward long short-term memory (LSTM) layer configured to process each input token in the input sequence in a forward order to generate a respective forward representation of each input token, an input backward LSTM layer configured to process each input token in a backward order to generate a respective backward representation of each input token and a plurality of hidden LSTM layers configured to process a respective combined representation of each of the input tokens in the forward order to generate a respective encoded representation of each of the input tokens; and a decoder subsystem configured to receive the respective encoded representations and to process the encoded representations to generate an output sequence.

FIG. 1