The an rnn-language model (rnnlm) or a special

Design, Architecture

The simplest and most efficient way of applying an RNN-LanguageModel (RNNLM) or a special type of Feedforward Neural NetworkLanguage Model (NNLM) in different types of applications likespeech recognition 6 8and visual object recognition 11.

More recently, researchers have begun to look into the differentways of inputting information about the source language into theNNLM. Examples of this work include Auli et al. 1 , who combinean NNLM with a topic model of the input sentence, which results inimproving the rescoring performance. Devlin et al. 7 is the anotherone who followed a similar approach, but they incorporated theirNNLM into the decoder of an MT system and used the decoder ? salignment information to provide the NNLM with the most usefulwords in the input sentence. Their approach was highly successfuland the improvements were also very good . Kalchbrenner and Blunsom 9 , were the first to map the inputsentence into a vector and vice versa, although they map sentencesto vectors using convolutional neural networks, which lose theordering of the words.

Similarly to this work, Cho et al . 5 usedan LSTM-like RNN architecture to map sentences into vectors andback, although their primary focus was on integrating their neuralnetwork into an SMT system. Bahdanau 2 et al.

also attempteddirect translations with a neural network that used an attentionmechanism to overcome the poor performance on long sentencesexperienced by Cho et al. 5 and resulted in better results. Likewise, Pouget-Abadie et al. 12 who attempted to address the memoryproblem of Cho et al. 5 by translating pieces of the source

sentencein way that produces smooth translations, which is similarto a phrase-based approach. We suspect that they could achievesimilar improvements by simply training their networks by reversingtheir source sentences. End-to-end training is also the focus ofHermann et al.

3, whose model represents the inputs and outputsby feedforward neural networks, which is followed by mappingthe similar points in the space . However, their approach was notable to generate translations directly: to get a translation, there is aneed to look up for closest vector in the pre-computed database ofsentences. Recurrent neural networks is used in the Handwriting detectionwhich can be done with two approaches online and offlineL. Schomaker 14 is the researcher who gave his contribution onthe online approach by first segmenting the data at the minima ofthe Y co-ordinates and then applying the self organising maps .

E. Kavallieratou 10 was the another one who contributed in offlineapproach by using the minima of the vertical histogram for theinitial estimation of the character boundaries and then applying thevarious heuristics to improve the segmentation . Both these onlineand offline approach as applied with the help of Recurrent neuralnetworks which is responsile for identifying the handwriting of any person.