

Quad Chart Summaries of Papers Presented by Three Other Students

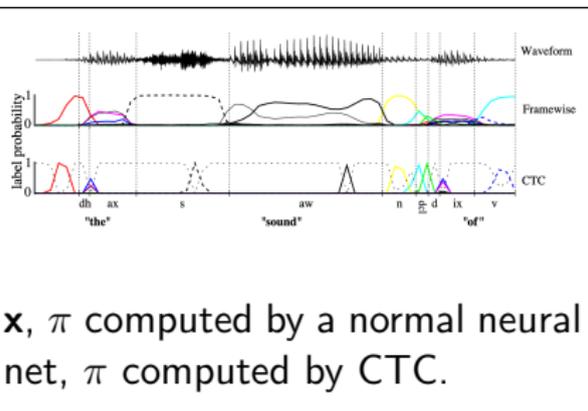
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Connectionist Temporal Classification (Graves, 2006)

CTC is a new training criterion for sequence-to-sequence neural networks, that allows them to be trained without time alignments.



\mathbf{x} , π computed by a normal neural net, π computed by CTC.

The neural net is trained to maximize

$$p(\mathbf{y}|\mathbf{x}) = \sum_{\pi \in \mathcal{B}^{-1}(\mathbf{y})} p(\pi|\mathbf{x})$$

where \mathbf{y} =label sequence, \mathbf{x} =feature sequence, $\pi = \mathcal{B}^{-1}(\mathbf{y}) =$ time-aligned label sequence.

Before this paper, neural networks could be trained for sequence-to-sequence problems only after a pre-processing step that would compute the time-aligned label sequence. This paper showed how to optimize over all possible time alignments.

Quad chart for paper #2

Main point of paper #2.

Image for paper #2.

Algorithm details of paper #2.

Background and impact of paper #2.

Quad chart for paper #3

Main point of paper #3.

Image for paper #3.

Algorithm details of paper #3.

Background and impact of paper #3.