Recurrent Neural Networks

deeplearning.ai

Language model and sequence generation

What is language modelling?

Speech recognition

The apple and pair salad.

The apple and pear salad.

$P(\text{The apple and pair salad}) =$

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Language modelling with an RNN

Training set: large corpus of english text.

Cats average 15 hours of sleep a day.

The Egyptian Mau is a bread of cat. <EOS>

RNN model

Cats average 15 hours of sleep a day. <EOS>

$$\mathcal{L}(\hat{y}^{<t>}, y^{<t>}) = -\sum_i y_i^{<t>} \log \hat{y}_i^{<t>}$$

$$\mathcal{L} = \sum_t \mathcal{L}^{<t>}(\hat{y}^{<t>}, y^{<t>})$$

Andrew Ng