4712099

VISUALIZING AND UNDERSTANDING RECURRENT NETWORKS

1. For Recurrent Neural Network (RNN) Models, the hidden state vector h^l_t varies for variants of RNN model. Which of the following is correct?
    a. In Vanilla Recurrent Neural Network, the input is transformed, and addictive interaction is done before being squashed by tanh. The parameter matrix W^l is a n x 2n matrix.
    b. Long Short Term Memory mitigates the vanishing gradient problem. Here, the h^l_t and memory vector must be maintained at every point of the network and the W^l is a 4n x 2n matrix.
    c. The Gated Recurrent Unit computes the h^l_t and smoothly interpolates towards h^l_t gated by z. The W^l is a 2n x 2n matrix.
    d. All the above

Answer: d

Quo Vadis, Action Recognition? A New Model and the Kinetics Dataset

1. "Two-Stream Inflated 3D ConvNets (I3D)" model (filters are cubic and temporal dimension is introduced to inflate) uses Kinetics Human Action Video dataset (KHAVD) that provides pretraining to the current deep neural network architectures and is fine-tuned on HMDB-51 and UCF-101 datasets. After this process, the task of action classification is analyzed. Which of the following is true about the performance boost provided by KHAVD to networks of smaller datasets?

    a. The overall performance was above 95% for KHAVD pretrained models when they were applied on UCF-101 and HMDB-51 datasets and compared with the state of the art performance
    b. The better quality of KHAVD or the better architecture of I3D has made I3D models perform better than prior C3D (3D convnets)
    c. Pre-training I3D RGB stream Kinetics and then application on HMDB-51 dataset has improved the predictions by showing an increase in performance as 3D convenes are data hungry
    d. All the above

Answer: d