

Discovery of Modifications on Contrastive Self-Supervised Learning

WHEN

April 26, 2022
12:00PM

WHERE

Zoom Meeting



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The gap between Self-Supervised Learning (SSL) and supervised learning has been reduced dramatically in recent years as more methods were developed in this area. In this paper, we introduced four different contrastive SSL methods: SimCLR, NNCLR, SimSiam, and SwAV. We explored possible modifications and improvements for the SwAV method and compared the modified methods with previous methods that we introduced. The comparison is based on transfer learning on the CIFAR data set. One of our modifications outperforms the original SwAV method and reaches an accuracy rate of 72.85%. We have discovered the parameters that influence the performance of our methods, and also find those values that help the methods have a better performance. Further work can be done with a more complicated data set and backbone network.

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