A Mutually Exclusive Task Generation Method Based on Data Augmentation

Authors : Haojie Wang, Xun Li, Rui Yin

Abstract : In order to solve the memorization overfitting in the model-agnostic meta-learning MAML algorithm, a method of generating mutually exclusive tasks based on data augmentation is proposed. This method generates a mutex task by corresponding one feature of the data to multiple labels so that the generated mutex task is inconsistent with the data distribution in the initial dataset. Because generating mutex tasks for all data will produce a large number of invalid data and, in the worst case, lead to an exponential growth of computation, this paper also proposes a key data extraction method that only extract part of the data to generate the mutex task. The experiments show that the method of generating mutually exclusive tasks can effectively solve the memorization overfitting in the meta-learning MAML algorithm.

Keywords : mutex task generation, data augmentation, meta-learning, text classification.