Supplementary Material for ‘Regularized Mutual Learning for Personalized Federated Learning’

1. Additional Experiments

Here we conduct experiments on the CIFAR-100 datasets and we consider an extreme non-i.i.d. condition that different clients possess data from classes which are non-overlapping in different clients. According to the results shown in Figure 1 where each client possesses data from 10 or 20 classes when there are 10 or 5 clients, we can see that the performance of the proposed PFML method achieves superior performance with different learning rates, which demonstrates the effectiveness of the proposed PFML method.

Figure 1: The classification accuracies of different methods by varying various hyperparameters, including the number of clients and the learning rate (denoted by lr), on the CIFAR-100 dataset based on the LeNet-5.

(a) 5 clients, lr=0.01  (b) 5 clients, lr=0.02  (c) 10 clients, lr=0.01  (d) 10 clients, lr=0.02