Introduction of Python code name

Respective programs were ere prepared in order to answer these questions in the paper. First, the conditions that depend on whether or not class u is included in the training / test data, and that depend on utilized model are introduced.

The training data for learning is described as L, and the test data is described as T. Furthermore, the case where class u is included is described as (with u, WU), and the case without class u is described as (without u, NU). The conditions that use EDL are described as 1, and the conditions that use m-EDL are described as 2. In this experiment, comparisons are selected from the conditions shown by $n\_L_{xx}T_{yy}$ shown in Table 1, and Q1-4 are answered.

More detailed setting for each condition are introduced.

Q2-4 in the paper can determine the type and ratio of class u that is included in the training / test data. In this paper, the data of class k is first set as MNIST. In other words, $K = 10$. Meanwhile, the class u is set as either Fashion MNIST (denoted as F) or EMNIST (denoted as E), and the type of class u included in the training / test data was selected from Table 2 according to the Question. For example, $L_{NU}T_{WU}\_T_F$ indicates that u is not included in the training data but that the fashion MNIST data is included in class u for the test data. $L_{WU}T_{WU}\_same\_F$ indicates that fashion MNIST is used as class u in both the training and test data. $L_{WU}T_{WU}\_dif\_L_ET_F$ shows that the type of class u included in the training and test data differ, with EMNIST included in the training data and fashion MNIST included in the test data.

Table 1

		Model	
Learning (training) data	Test data	1 EDL	2 m-EDL
w/o u (L_{NU})	w/o u (T_{NU})	$1\_L_{NU}T_{NU}$	$2\_L_{NU}T_{NU}$
	w/ u (T_{WU})	$1\_L_{NU}T_{WU}$	$2\_L_{NU}T_{WU}$
w/ u (L_{WU})	w/o u (T_{NU})		
	w/ u (T_{WU})		$2\_L_{WU}T_{WU}$

Table 2

			Test data: MNIST…						
			only	mixed w/ fashion MNIST			mixed w/ EMNIST		
			0%	25%	50%	75%	25%	50%	75%
Learning (training) Data: MNIST…	only	0%	$L_{NU}T_{NU}$	$L_{NU}T_{WU}\_T_F$			$L_{NU}T_{WU}\_T_E$		
	mixed w/ fashion MNIST	25%		$L_{WU}T_{WU}\_same\_F$			$L_{WU}T_{WU}\_dif\_L_FT_E$		
		50%							
		75%							
	mixed w/ EMNIST	25%		$L_{WU}T_{WU}\_dif\_L_ET_F$			$L_{WU}T_{WU}\_same\_E$		
		50%							
		75%							