ICML-Rebuttal

1 Supplementary experiments

Table 1: Report the last-task accuracy A_{last} and average accuracy A_{avg} for all methods and all experiments. Among them, FCIL-M: Federated Class-Incremental of Matek-19; FCIL-A: Federated Class-Incremental of Acevedo-20; FCIL-H: Federated Class-Increment of HLwbc; All of the above include Client-IL. The experimental results (%) of various baselines under the data heterogeneity parameter $\alpha = 0.5$. The datasets of Matek19, Aceve20 and HLwBC in the class incremental learning scenario, and the scenario of FDIL. Other parameter settings: FCIL: $\delta = 0.02, a = 0.8, \lambda = 0.4$; FDIL: $\delta = 0.02, a = 0.4, \lambda = 0.8$.

FIL	FCIL-M		FCIL-A		FCIL-H		FDIL	
	$\mathcal{A}_{avg}(\%)$	$\mathcal{A}_{last}(\%)$	$\mathcal{A}_{avg}(\%)$	$\mathcal{A}_{last}(\%)$	$\mathcal{A}_{avg}(\%)$	$\mathcal{A}_{last}(\%)$	$\mathcal{A}_{avg}(\%)$	$\mathcal{A}_{last}(\%)$
UP	86.61	85.5	88.62	88.78	95.06	95.87	84.10	89.18
iCaRL	72.05	58.88	65.36	57.3	61.89	46.51	64.57	70.96
UACL	52.06	25.20	54.62	49.32	66.59	48.44	51.21	36.53
Re-Fed	82.75	70.53	74.18	70.84	76.98	73.44	81.66	87.48
PILoRA	81.38	76.21	68.52	57.4	53.83	31.86	46.55	27.78
FedSpace	47.38	21.45	24.78	11.32	27.31	13.14	-	-
FCIL	49.73	39.86	30.31	12.25	-	-	-	-
Our	83.47	80.63	83.26	86.52	91.77	87.34	82.04	87.64

Table 2: Report the model training time and the video memory occupied by our method. Training time: The average training duration for each task; Memory Overhead: The average, minimum, and maximum memory load for each client.

FIL	Trainning Time	Memory Overhead		
		Avg	Min	Max
iCaRL	2000s	799.15M	1050.05M	284.06M
UACL	2250s	815.91M	1072.66M	326.50M
Re-Fed	2400s	1108.36M	1704.91M	283.74M
PILoRA	3675s	2498.96M	3348.53M	1110.30M
FedSpace	3750s	248.04M	264.42M	173.10M
FCIL	4650s	509.4M	131.34M	613.89M
Our	2450s	1288.01M	1705.93M	283.74M

Table 3: Taking FCIL-M as an example, report the storage space $m_{c,t}$ of the example sets allocated by our algorithm to each client under each task. Here, c represents the client index and t represents the task index.

our	Task 1	Task 2	Task 3	Task 4
client 1	240	322	321	346
client 2	239	322	400	61
client 3	240	190	47	367
client 4	238	209	309	122
client 5	239	152	132	370
client 6	-	200	190	134
client 7	-	-	-	200
Fixed (baselines)	Task 1	Task 2	Task 3	Task 4
client 1	200	200	200	200
client 2	200	200	200	200
client 3	200	200	200	200
client 4	200	200	200	200
client 5	200	200	200	200
client 6	-	200	200	200
client 7	-	-	-	200