Additional experiments

Table 1: Real data - Full data sets. Accuracy (in %) on test samples. `FedAvg` and `SCAFFOLD` are not personalised FL approaches but stand for well-known FL benchmarks.

	CIFAR-10		CIFAR-100	
(# clients b, # classes per client S)	(100, 2)	(100, 5)	(100, 5)	(100, 20)
Local learning only	89.79	70.68	75.29	41.29
`FedAvg` (McMahan et al., 2017)	42.65	51.78	23.94	31.97
`SCAFFOLD` (Karimireddy et al., 2020)	37.72	47.33	20.32	22.52
`LG-FedAvg` (Liang et al., 2019)	84.14	63.02	72.44	38.76
`Per-FedAvg` (Fallah et al., 2020)	82.27	67.20	72.05	52.49
`L2GD` (Hanzely and Richtárik, 2020)	81.04	59.98	72.13	42.84
`APFL` (Deng et al., 2021)	83.77	72.29	78.20	55.44
`DITTO` (Li et al., 2021)	85.39	70.34	78.91	56.34
`FedRep` (Collins et al., 2021)	87.70	75.68	79.15	56.10
`FedAvg + fine-tuning (FT)`	85.63	71.32	79.03	56.19
`FedSOUL` (this paper)	91.12	79.48	79.56	59.73

Table 2: Real data - Full data sets using `Motley` experimental design for the cross-device setting. Accuracy (in %) on test samples.

	EMNIST	StackOverflow
Local learning only	93.6	6.20
`FedAvg` (McMahan et al., 2017)	85.2	26.9
`FedAvg + fine-tuning (FT)`	98.9	28.2
`SCAFFOLD` (Karimireddy et al., 2020)	82.5	25.7
`DITTO` (Li et al., 2021)	98.8	28.4
`FedRep` (Collins et al., 2021)	99.1	28.8
`FedSOUL` (this paper)	99.0	29.1

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