Setting	All	Old	New
$\alpha = 0$	**63.1**	**81.7**	**53.8**
$\alpha = 0.01$	52.9	76.0	41.8
$\alpha = 0.05$	41.8	61.2	32.5
$\alpha = 0.1$	32.9	56.2	21.7

Table 1: Performance analysis of different values of α in Eq. 8 on the Stanford Cars dataset.

Methods	CUB			Stanford Cars			Aircraft			
	All	**Old**	**New**	**All**	**Old**	**New**	**All**	**Old**	**New**	**Avg.**
XCon	52.1	54.3	51.0	40.5	58.8	31.7	47.7	44.4	49.4	46.8
PCAL	62.9	64.4	62.1	50.2	70.1	40.6	52.2	52.2	52.3	55.1
Methods	Cifar10			Cifar100			ImageNet100			
	All	**Old**	**New**	**All**	**Old**	**New**	**All**	**Old**	**New**	**Avg.**
XCon	96.0	97.3	95.4	74.2	81.2	60.3	77.6	93.5	69.7	82.6
PCAL	97.9	96.6	98.5	81.2	84.2	75.3	83.1	92.7	78.3	87.4

Table 2: Performance comparison of XCon and PCAL on generic and fine-grained datasets.

Methods	Cifar10			Cifar100			ImageNet100			
	All	**Old**	**New**	**All**	**Old**	**New**	**All**	**Old**	**New**	**Avg.**
SPTNet	97.3	95.0	98.6	81.3	84.3	75.6	85.4	93.2	81.4	88.0
FlipClass	**98.5**	**97.6**	**99.0**	**85.2**	**84.9**	**85.8**	**86.7**	**94.3**	**82.9**	**90.1**
Methods	CUB			Stanford Cars			Aircraft			
	All	**Old**	**New**	**All**	**Old**	**New**	**All**	**Old**	**New**	**Avg.**
SPTNet	65.8	68.8	65.1	59.0	79.2	49.3	59.3	61.8	**58.1**	61.4
FlipClass	**71.3**	**71.3**	**71.3**	**63.1**	**81.7**	**53.8**	59.3	**66.9**	55.4	**64.6**

Table 3: Comparison of FlipClass and SPTNet on various datasets.

Setting	All	Old	New
Ours	**63.1**	**81.7**	**53.8**
+ ReMixMatch Distribution Alignment [2]	60.3	78.2	51.7
+ Prior Distribution Alignment [3, 4]	58.1	76.1	49.4

Table 4: Performance comparison on the Stanford Cars dataset with different distribution alignment strategies combined with our representation alignment.

Methods	Cifar10-LT			Cifar100-LT			Places-LT			
	Old	**New**	**All**	**Old**	**New**	**All**	**Old**	**New**	**All**	**Avg.**
Non-parametric										
ORCA†	77.5	55.6	66.6	55.0	30.8	50.1	21.5	6.9	14.2	43.6
GCD	78.5	71.7	75.1	65.5	49.0	62.2	29.9	22.7	26.2	54.5
OpenCon†	87.2	47.2	67.2	62.4	40.9	59.6	30.6	12.4	21.6	49.5
BaCon-O	83.3	78.0	80.7	66.5	**69.6**	67.1	30.7	25.6	28.1	58.6
BaCon-S	**94.2**	**88.1**	**91.1**	**67.4**	66.5	**67.2**	31.1	**28.4**	**29.9**	**62.7**
Parametric										
SimGCD	75.1	41.5	58.0	59.8	41.1	51.1	31.4	18.4	24.8	44.6
FlipClass	82.2	63.6	72.8	65.1	45.9	60.1	**31.8**	21.6	26.6	53.2

Table 5: Test accuracy (%) on three generic long-tailed image recognition datasets. (**bold**: best performance among all methods)

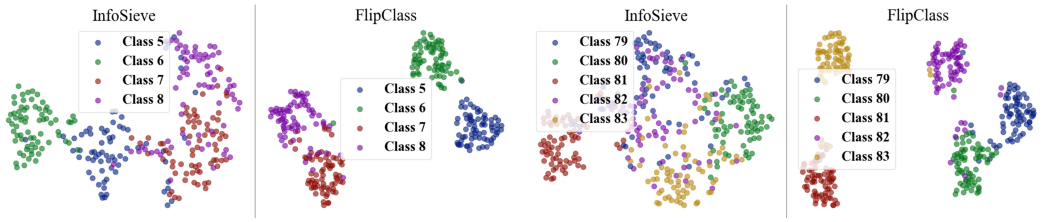

Figure 1: Zoom-in comparison of InfoSieve and FlipClass on the CUB dataset using t-SNE and PCA. FlipClass shows improved cluster separation and compactness.