

Experiments

Performance Comparison: Weibo

Method	Twitter				Weibo			
	5-Shot		10-Shot		5-Shot		10-Shot	
	Accuracy	F1 Score	Accuracy	F1 Score	Accuracy	F1 Score	Accuracy	F1 Score
VQA	73.62 \pm 1.83	76.69 \pm 1.23	73.49 \pm 2.61	74.69 \pm 2.97	76.93 \pm 0.71	75.88 \pm 0.45	77.80 \pm 1.43	76.36 \pm 1.77
attRNN	63.04 \pm 2.09	60.25 \pm 4.63	63.14 \pm 2.00	56.60 \pm 5.25	76.07 \pm 1.63	74.36 \pm 2.96	78.09 \pm 0.58	77.69 \pm 0.35
EANN	70.01 \pm 3.58	72.95 \pm 2.86	70.56 \pm 1.00	67.77 \pm 0.80	76.43 \pm 0.84	74.51 \pm 0.56	77.49 \pm 1.95	76.56 \pm 1.28
CNP	71.42 \pm 2.58	72.58 \pm 3.57	72.47 \pm 3.61	72.11 \pm 5.74	77.47 \pm 5.19	77.01 \pm 4.66	78.81 \pm 1.57	78.07 \pm 1.98
ANP	77.08 \pm 2.92	79.65 \pm 3.81	74.25 \pm 0.76	75.16 \pm 1.27	77.85 \pm 1.67	76.00 \pm 3.61	76.52 \pm 1.84	73.73 \pm 2.78
MAML	82.24 \pm 1.54	82.97 \pm 1.76	85.22 \pm 0.64	84.98 \pm 1.70	74.68 \pm 0.75	74.16 \pm 0.33	75.87 \pm 0.33	73.41 \pm 0.86
Meta-SGD	74.13 \pm 2.31	75.35 \pm 2.56	74.63 \pm 2.46	74.57 \pm 2.74	71.73 \pm 1.81	69.51 \pm 2.28	73.34 \pm 2.35	71.42 \pm 2.80
MetaFEND (Improvement)	86.45 \pm 1.83 (\uparrow 5.12%)	86.21 \pm 1.32 (\uparrow 3.91%)	88.79 \pm 1.27 (\uparrow 4.19%)	88.66 \pm 1.09 (\uparrow 4.33%)	81.28 \pm 0.75 (\uparrow 4.41%)	80.19 \pm 1.27 (\uparrow 4.13%)	82.92 \pm 0.13 (\uparrow 5.22%)	82.37 \pm 0.28 (\uparrow 5.51%)

- On the Weibo dataset, most of posts are associated with **different images**.
- Thus, can evaluate the performance of models under the circumstance where support sets **don't include direct clues with query set**.

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VQA	73.62 ± 1.83	76.69 ± 1.23	73.49 ± 2.61	74.69 ± 2.97	76.93 ± 0.71	75.88 ± 0.45	77.80 ± 1.43	76.36 ± 1.77
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MetaFEND (Improvement)	86.45 ± 1.83 (↑5.12%)	86.21 ± 1.32 (↑3.91%)	88.79 ± 1.27 (↑4.19%)	88.66 ± 1.09 (↑4.33%)	81.28 ± 0.75 (↑4.41%)	80.19 ± 1.27 (↑4.13%)	82.92 ± 0.13 (↑5.22%)	82.37 ± 0.28 (↑5.51%)

- ANP & CNP achieves better performance compared with gradient-based parameter meta-learning methods MAML & Meta-SGD.
- This's because parameter adaptation may not be effective when support set and query set do not share the same patterns.