An empirical study of pretrained representations for few-shot classification

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Class 1
Class 2
Class 3

Support set

Class prediction

Model

Query set
We train on cute dogs
But want to classify planes
Training on larger datasets helps [Triantafillou19]

We’re too poor to do that
Does few shot-classification still work if we don’t do any ‘meta’ learning?
Are some representations better than others?
- Training regime
- Original training dataset
- Network architecture

Are some few-shot learning methods better than others?
- Matching networks
- Prototype networks
- Last layer fine tuning
Backbone type vs. performance

Accuracy vs. Number of shots for various datasets and architectures.
Adaptation method comparison
End