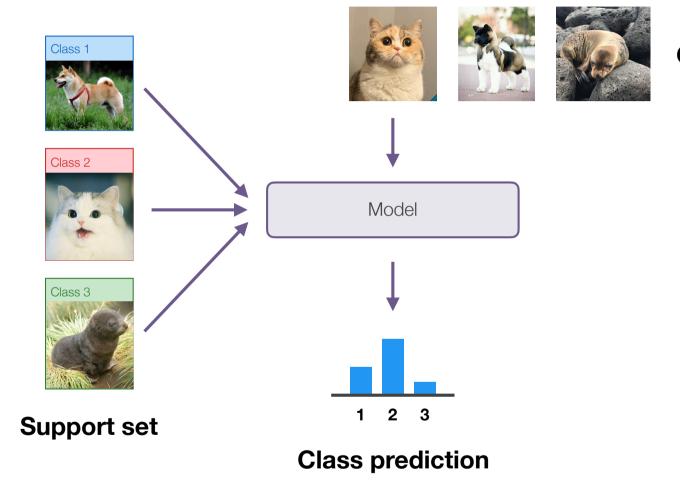
# An empirical study of pretrained representations for few-shot classification

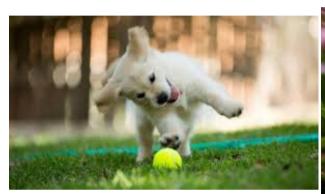
Tiago Ramalho, Thierry Sousbie, Stefano Peluchetti





**Query set** 

# We train on cute dogs















### But want to classify planes

















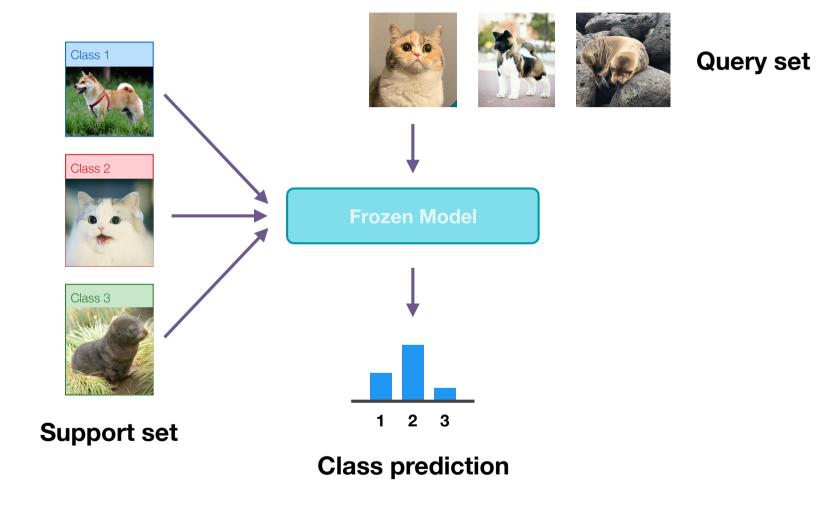




Training on larger datasets helps [Triantafillou19]

We're too poor to do that

Does few shot-classification still work if we don't do any 'meta' learning?



Meta
Transfer
Supervised
Learning

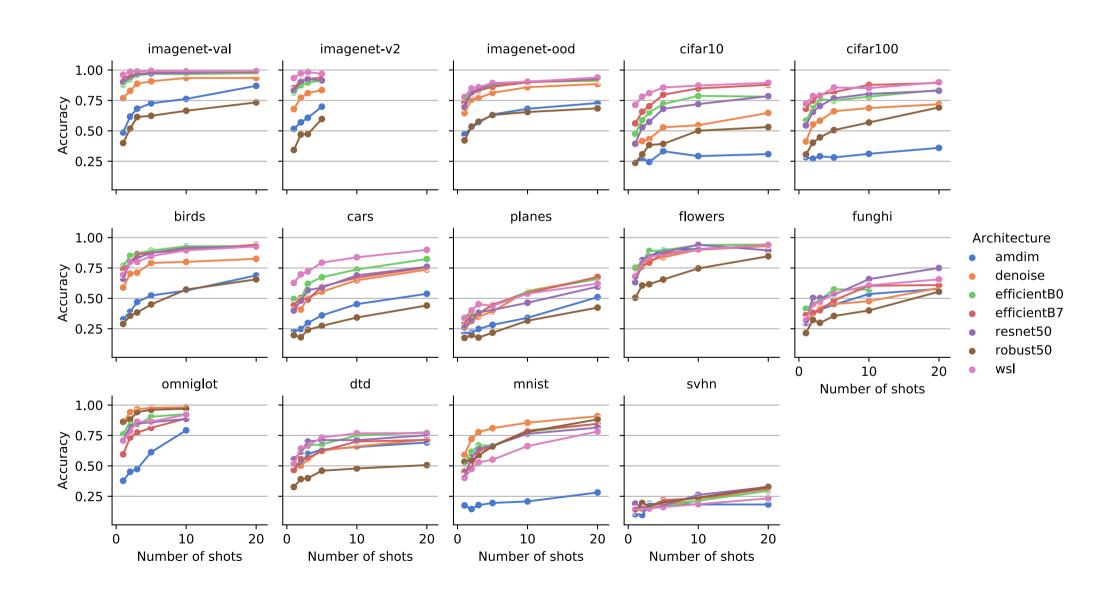
#### Are some representations better than others?

- Training regime
- Original training dataset
- Network architecture

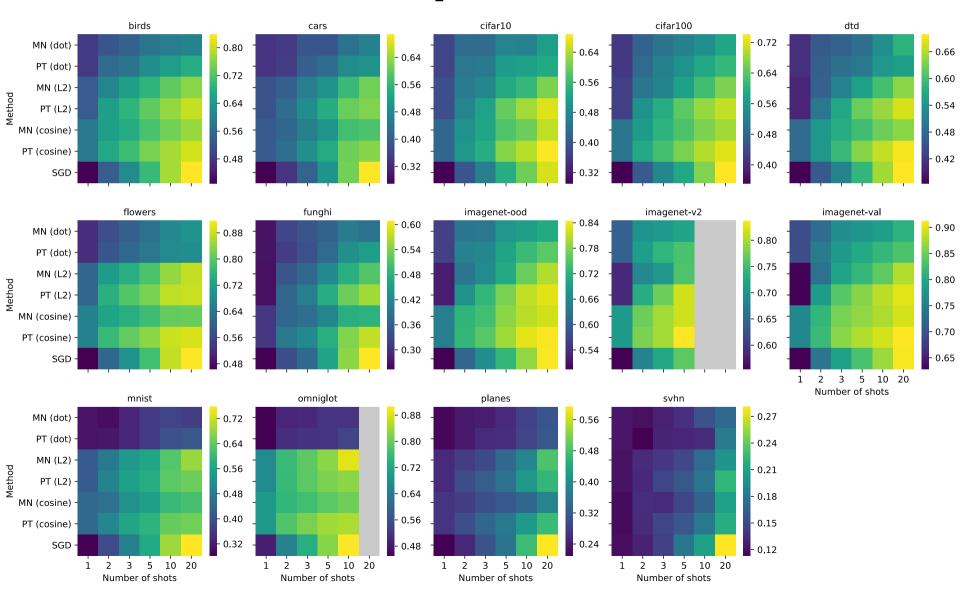
#### Are some few-shot learning methods better than others?

- Matching networks
- Prototype networks
- Last layer fine tuning

#### Backbone type vs. performance



# Adaptation method comparison



## End