Meta-learning with Adaptation

[Dong_DomainAdaptationInOneShotLearning](#)
[Meta-GMVAE](#)
[Li_LearningToGeneralize](#)
[Li_OnlineMetaLearning](#)
[Chen_BlendingTargetDomainAdaptation](#)
[Kang_TransferableMetaLearning](#)

[Park_FastAdaptationToSuperResolutionNetworks](#)
[Zintgraf_FastContextAdaptationViaML](#)
[AlShedivat_ContinuousAdaptationViaML](#)
[Klejch_LearningToAdaptAMetaLearningApproachForSpeakerAdaptation](#)

[Meta-learning survey](#)

Definition of meta-learning

Papers to read
- Parameter initialization
    - MAML: [1](#), [2](#), [3](#)
    - Outer optimization
        - By subspace: [1](#), [2](#)
        - By layer: [1](#), [2](#), [3](#)
        - By separating out scale and shift: [1](#)
    - Inner optimization: [1](#), [2](#), [3](#)
- Optimizer
    - Optimizer-centric approaches: [1](#), [2](#), [3](#), [4](#)
    - Trainable component w
        - Fixed step size: [1](#), [2](#)
        - Preconditioning matrices: [1](#), [2](#)
        - Define a full gradient optimizer: [1](#), [2](#), [3](#), [4](#)
    - Only require evaluations: [1](#)
- Feed-forward model
    - Black-box model-based learning: [1](#), [2](#), [3](#)
    - Hypernetworks
        - Feed-forward pass: [1](#), [2](#)
        - RNN: [1](#), [2](#), [3](#)
        - CNN: [1](#)
        - Set embedding: [1](#), [2](#)
    - Amortized inference
        - Probabilistic models: [1](#), [2](#), [3](#)
    - Memory-augmented neural networks: [1](#), [2](#)
- Embedding functions
    - Similarity comparison between query and support instances

- [1], [2], [3], [4]
- Task-conditional embedding: [1], [2]
- More elaborate comparison metric: [1], [2]
- Combine with gradient-based meta-learning to train other hyperparameters: [1]