



# Toward Multimodal Model-Agnostic Meta-Learning

Risto Vuorio<sup>1</sup>, Shao-Hua Sun<sup>2</sup>, Hexiang Hu<sup>2</sup> & Joseph J. Lim<sup>2</sup>

University of Michigan<sup>1</sup>

University of Southern California<sup>2</sup>



## The limitation of the MAML family

- One initialization can be suboptimal for multimodal task distributions.

## Multi-Modal MAML

1. Model-based meta-learner computes task embeddings
2. Task embeddings are used to modulate gradient-based meta-learner
3. Gradient-based meta-learner adapts via gradient steps

