

05:00 -- 07:00 PM @ East Exhibition Hall B + C #31

Multimodal Model Agnostic Meta-Learning via Task-Aware Modulation



Risto Vuorio*



Shao-Hua Sun*

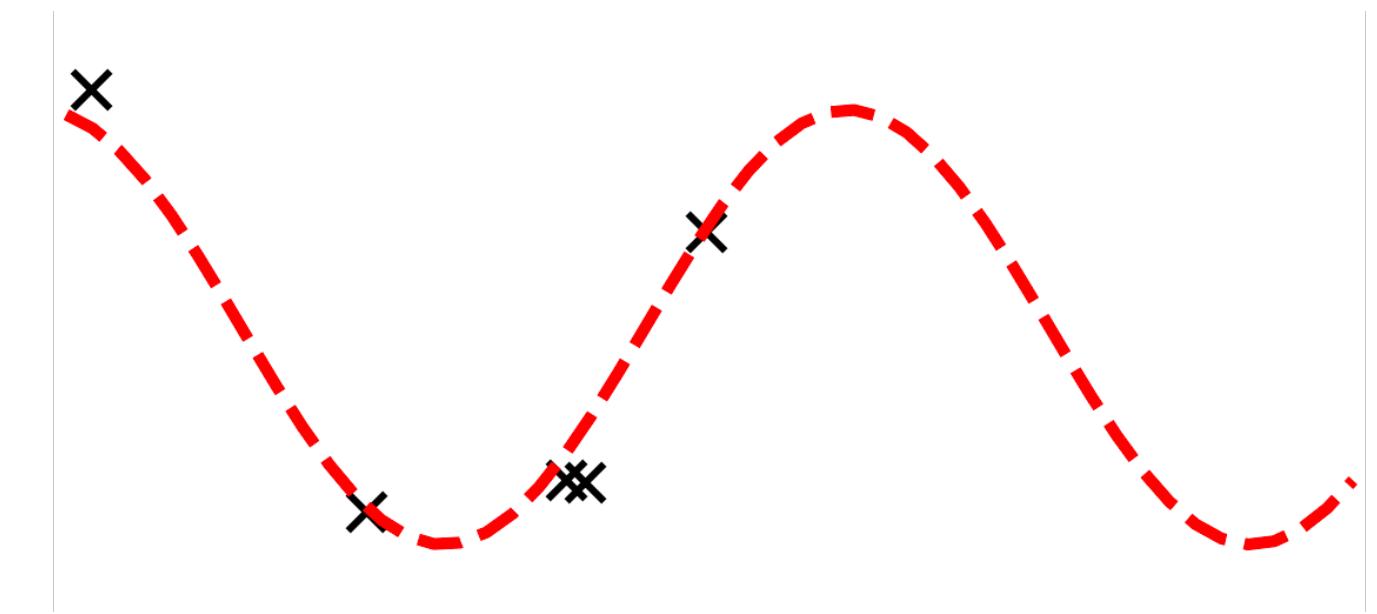


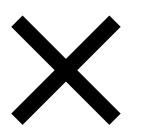
Hexiang Hu

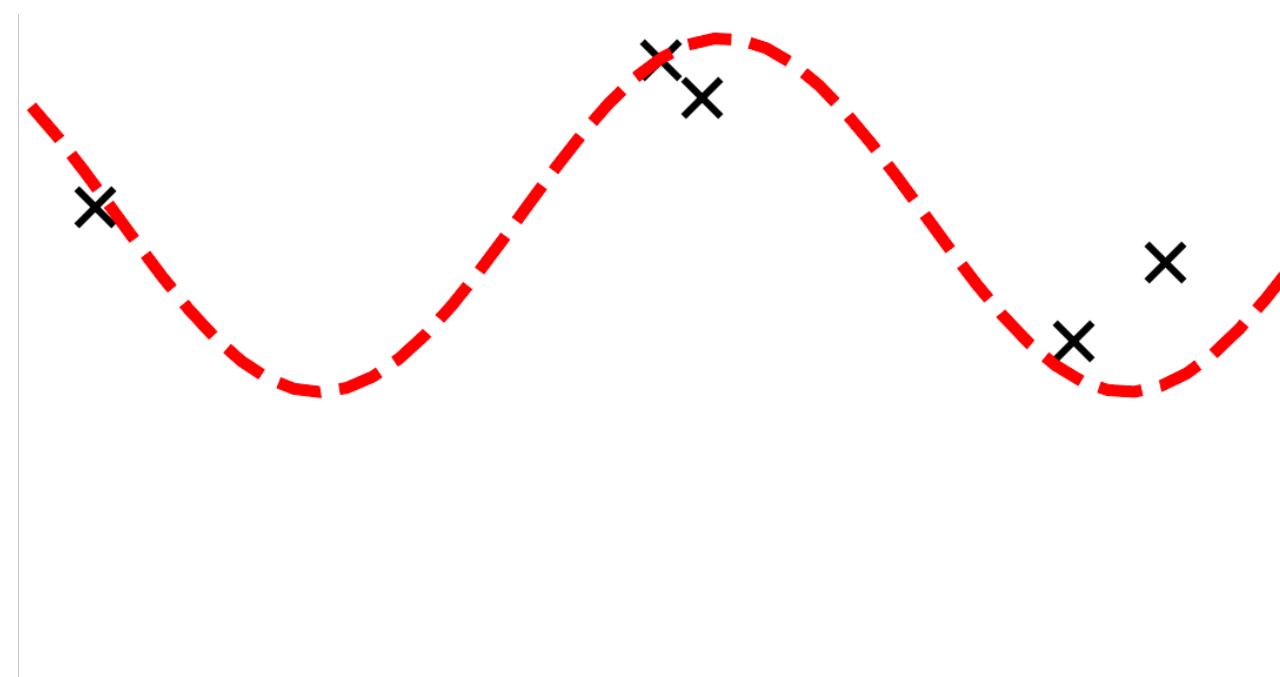
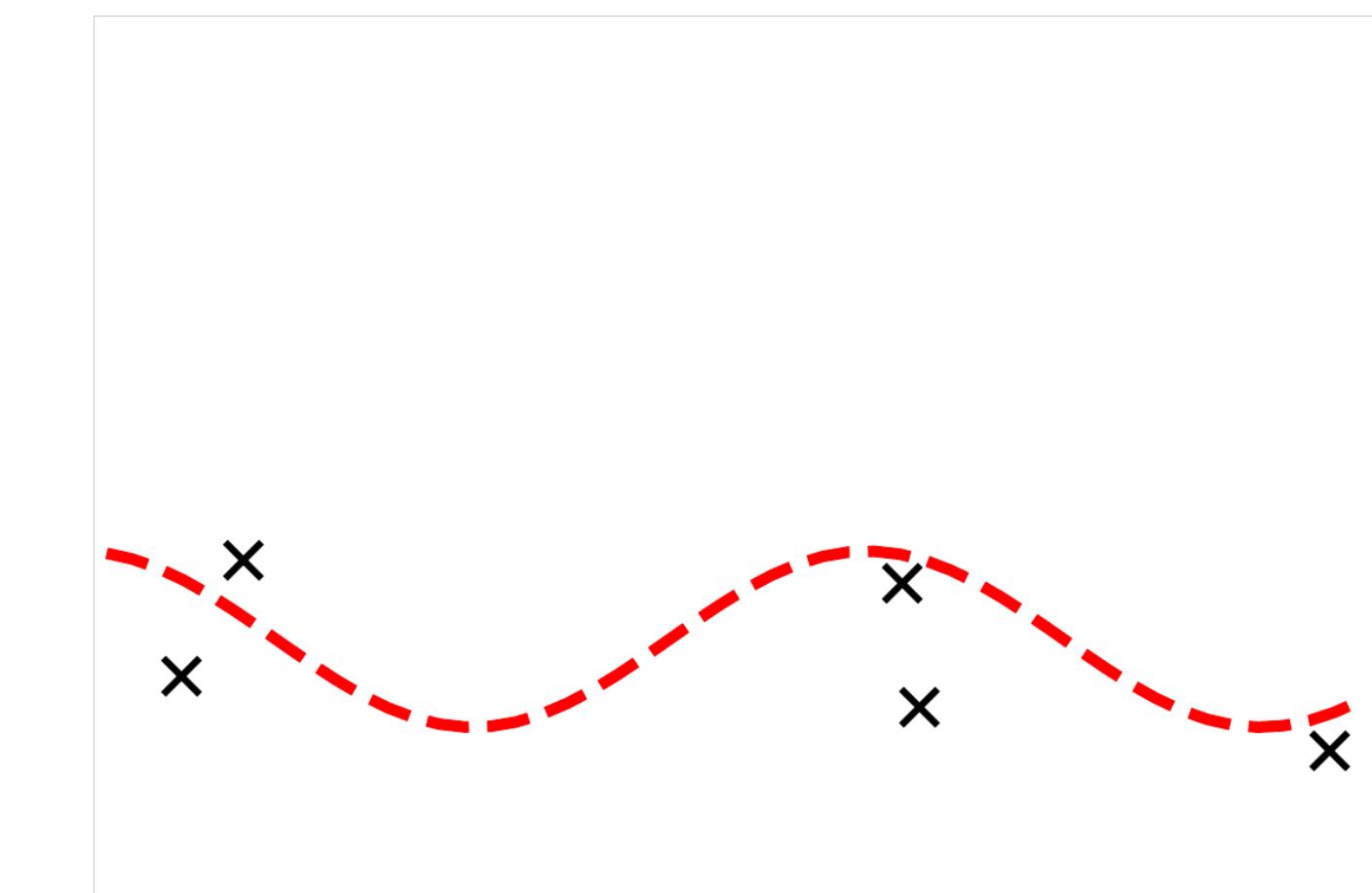
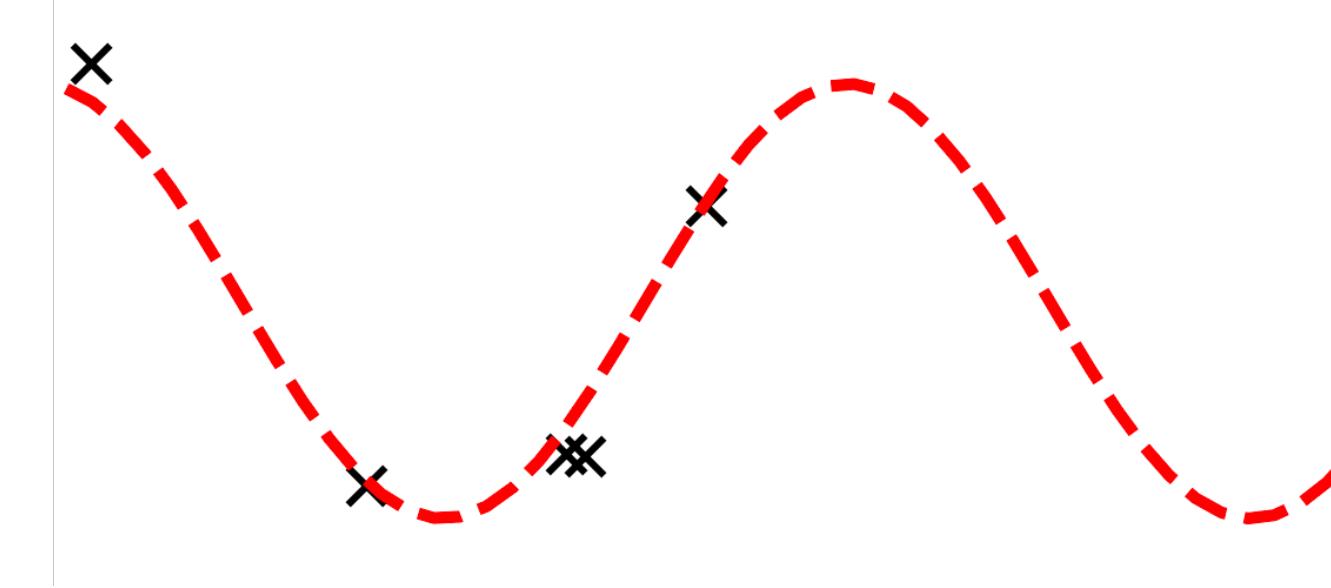


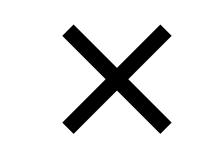
Joseph J. Lim

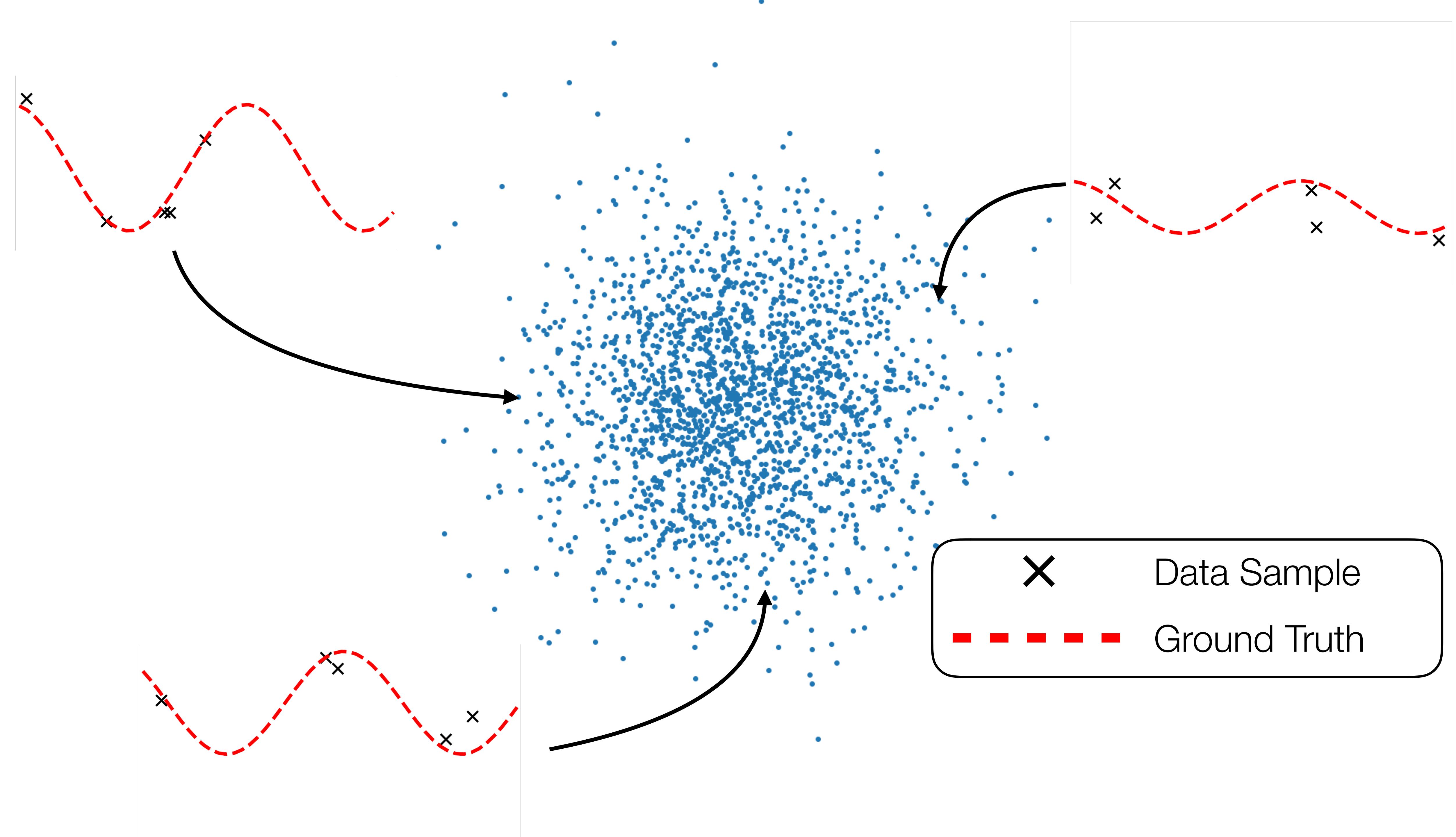


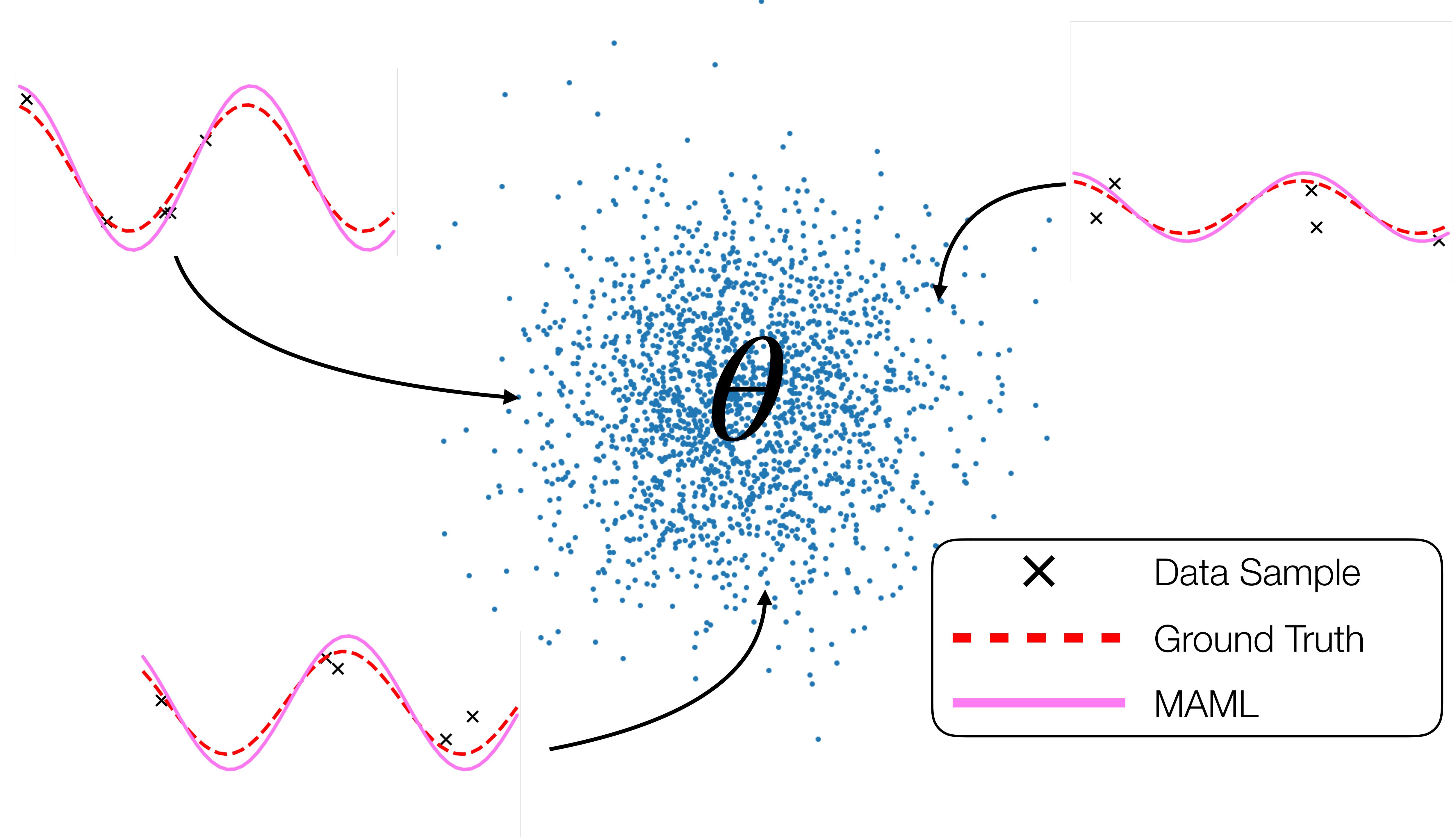


 Data Sample
 Ground Truth

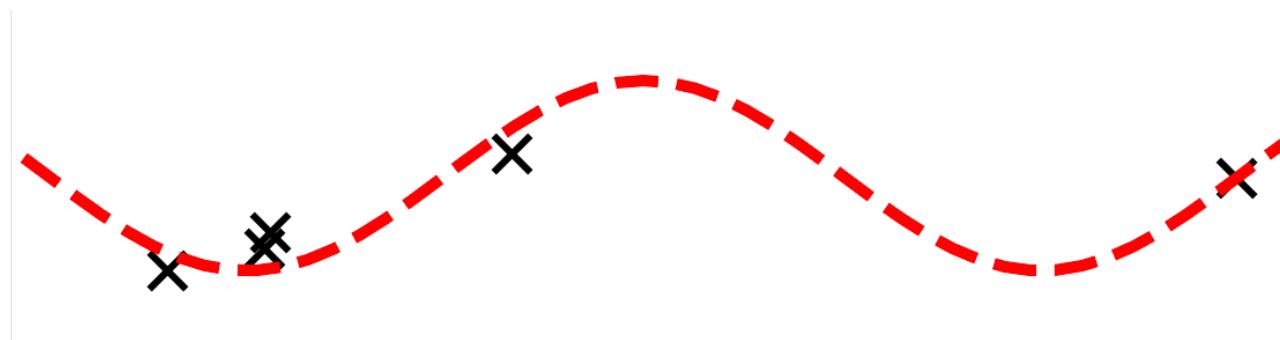


 Data Sample
 Ground Truth

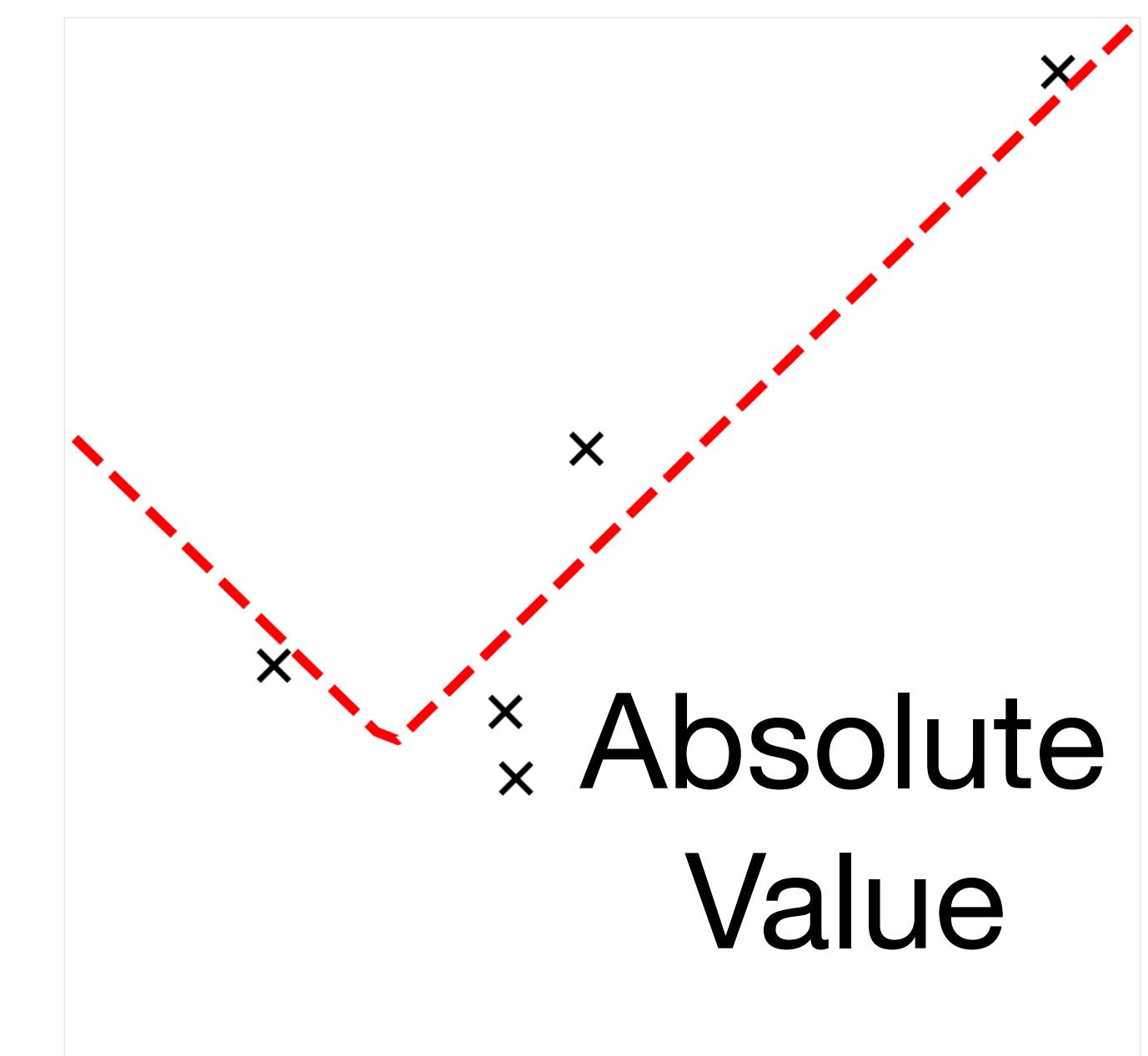
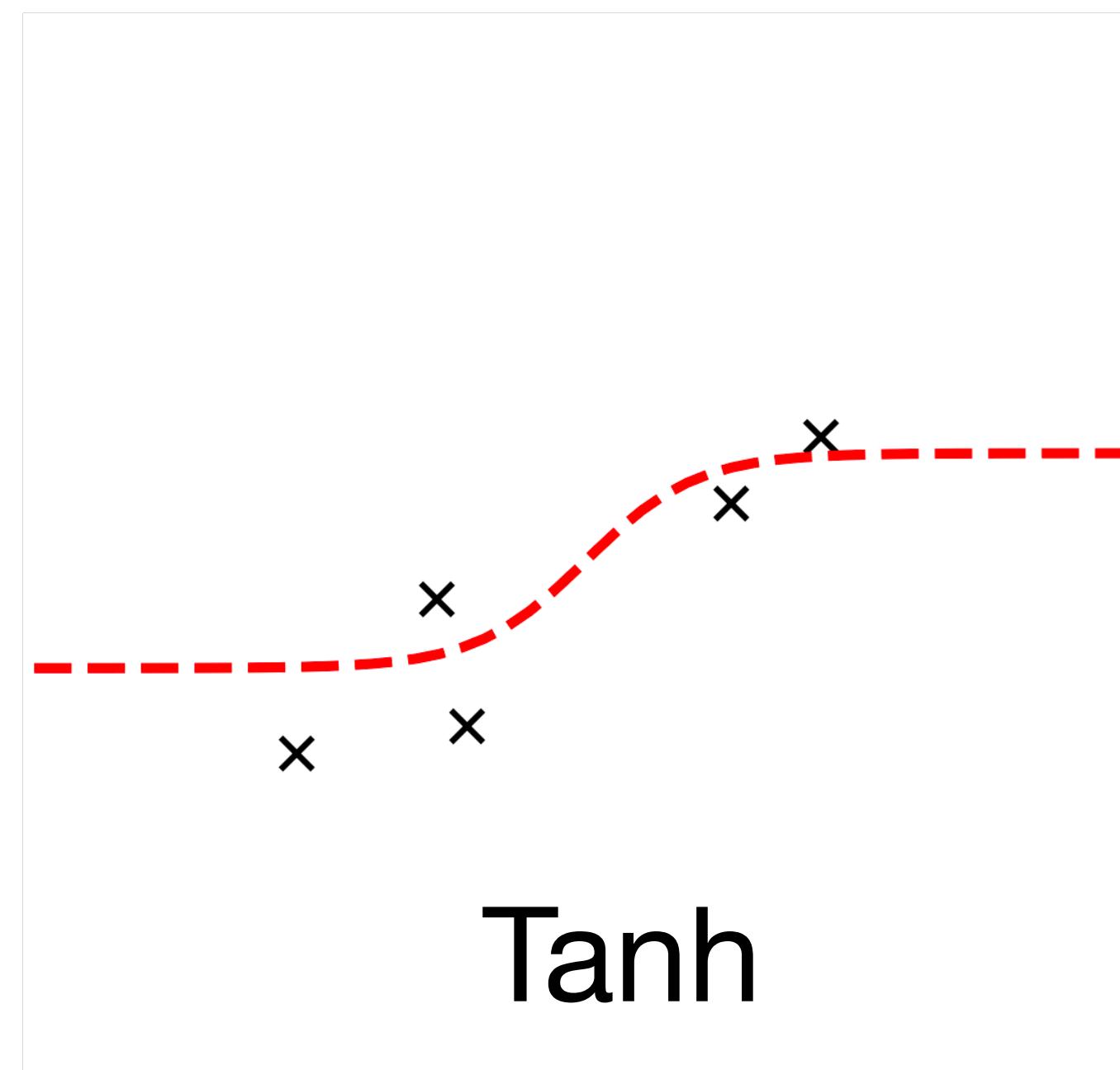




Sinusoid



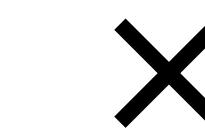
Tanh



Sinusoid

Tanh

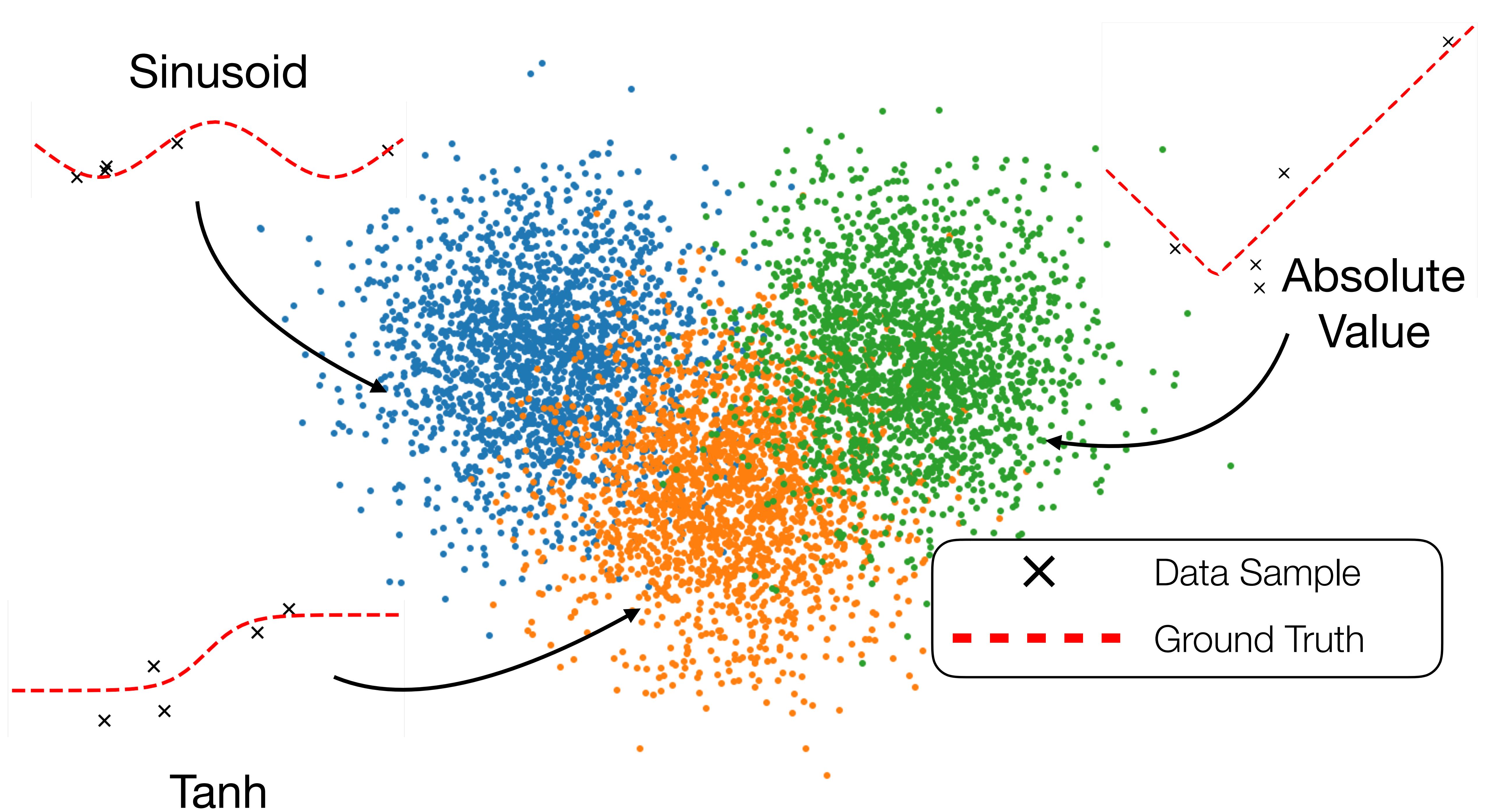
Absolute
Value



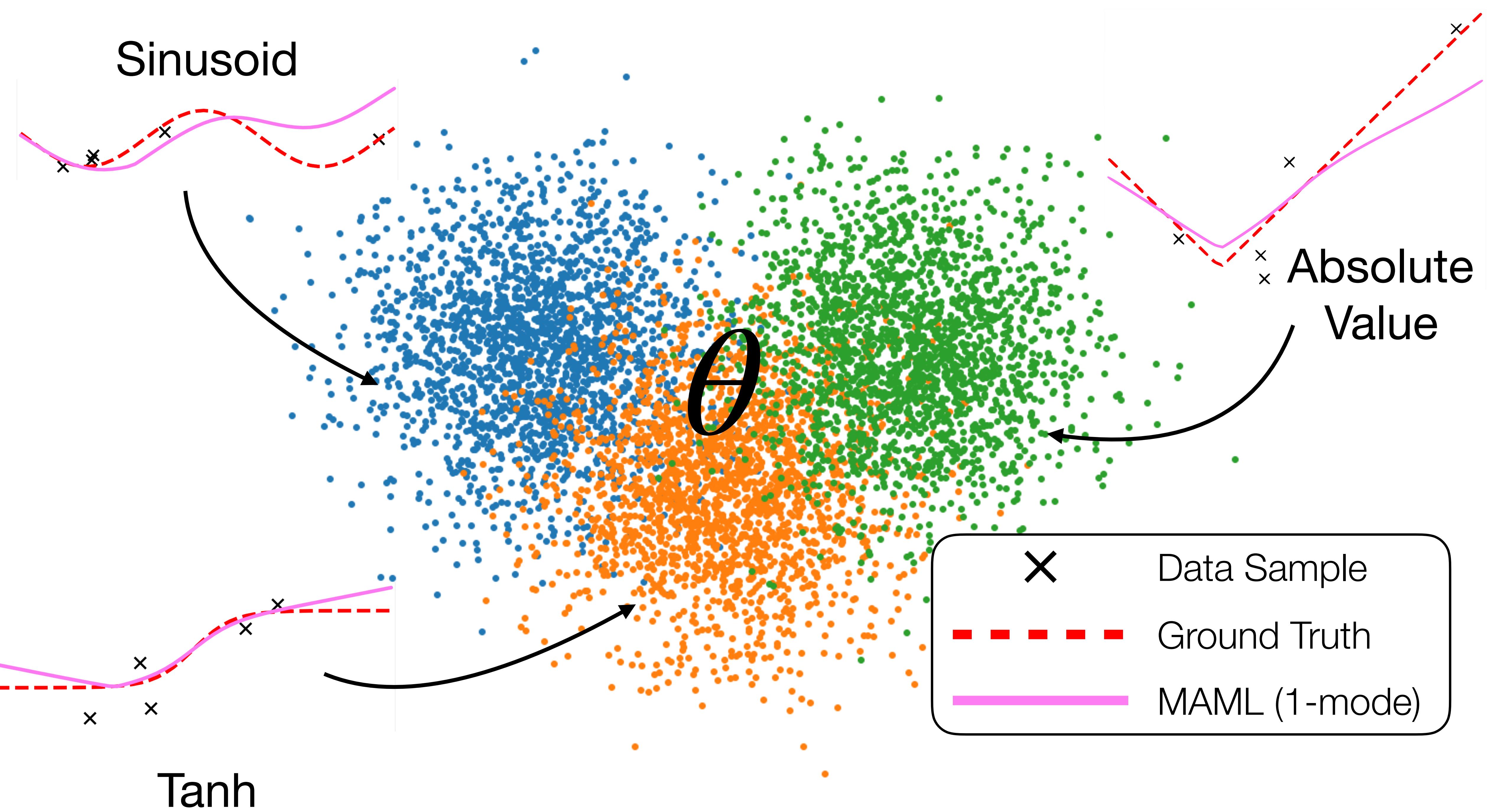
Data Sample



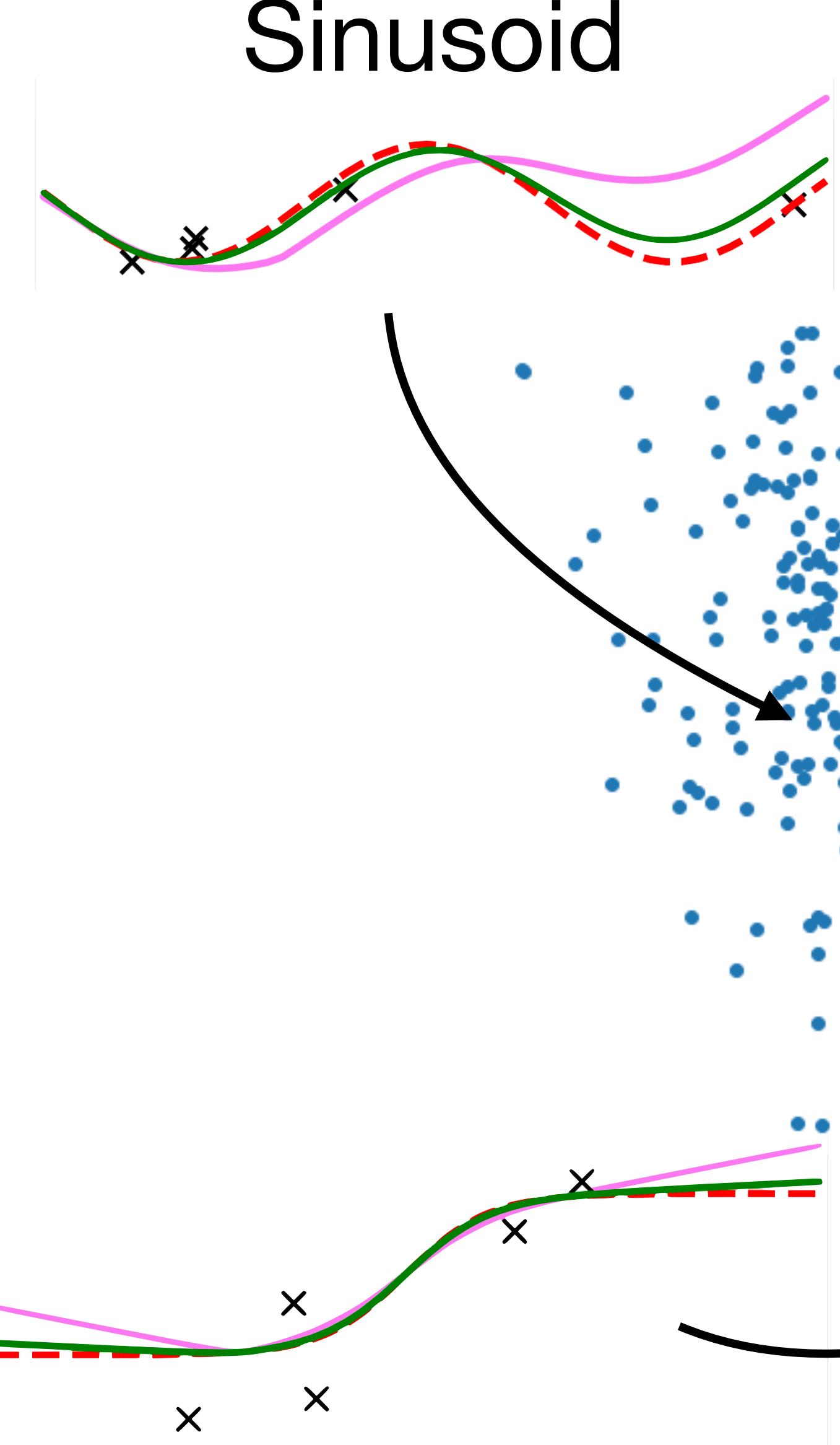
Ground Truth



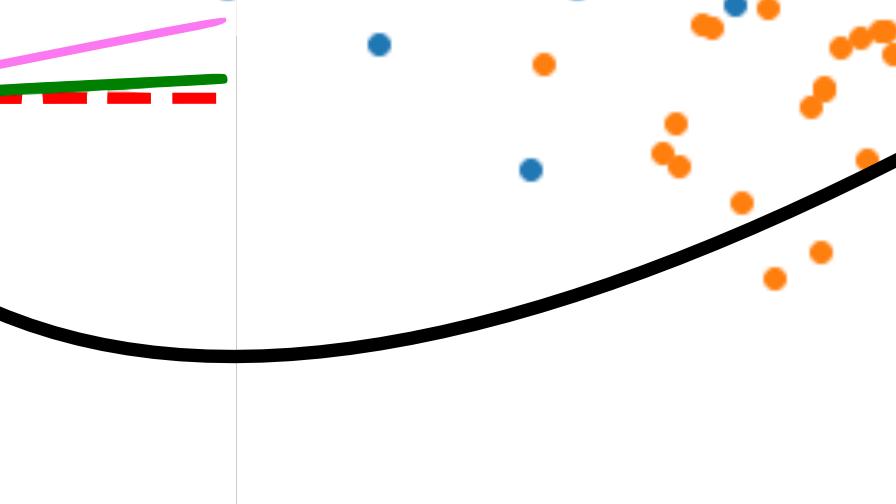
Sinusoid



Sinusoid



Tanh



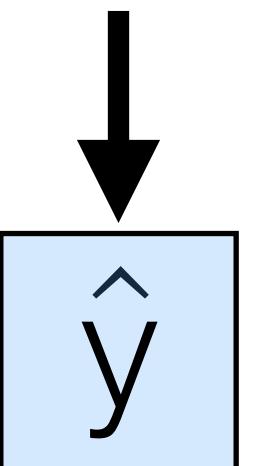
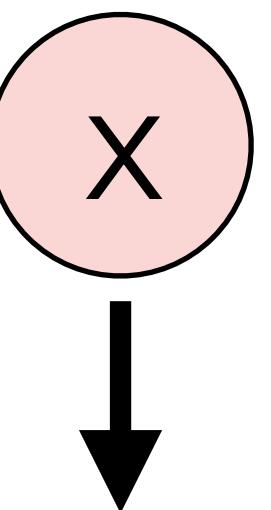
θ_1

θ_2

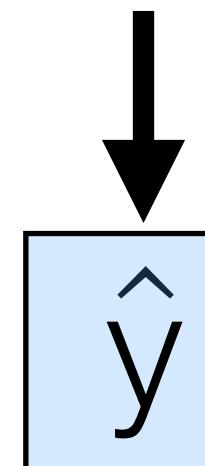
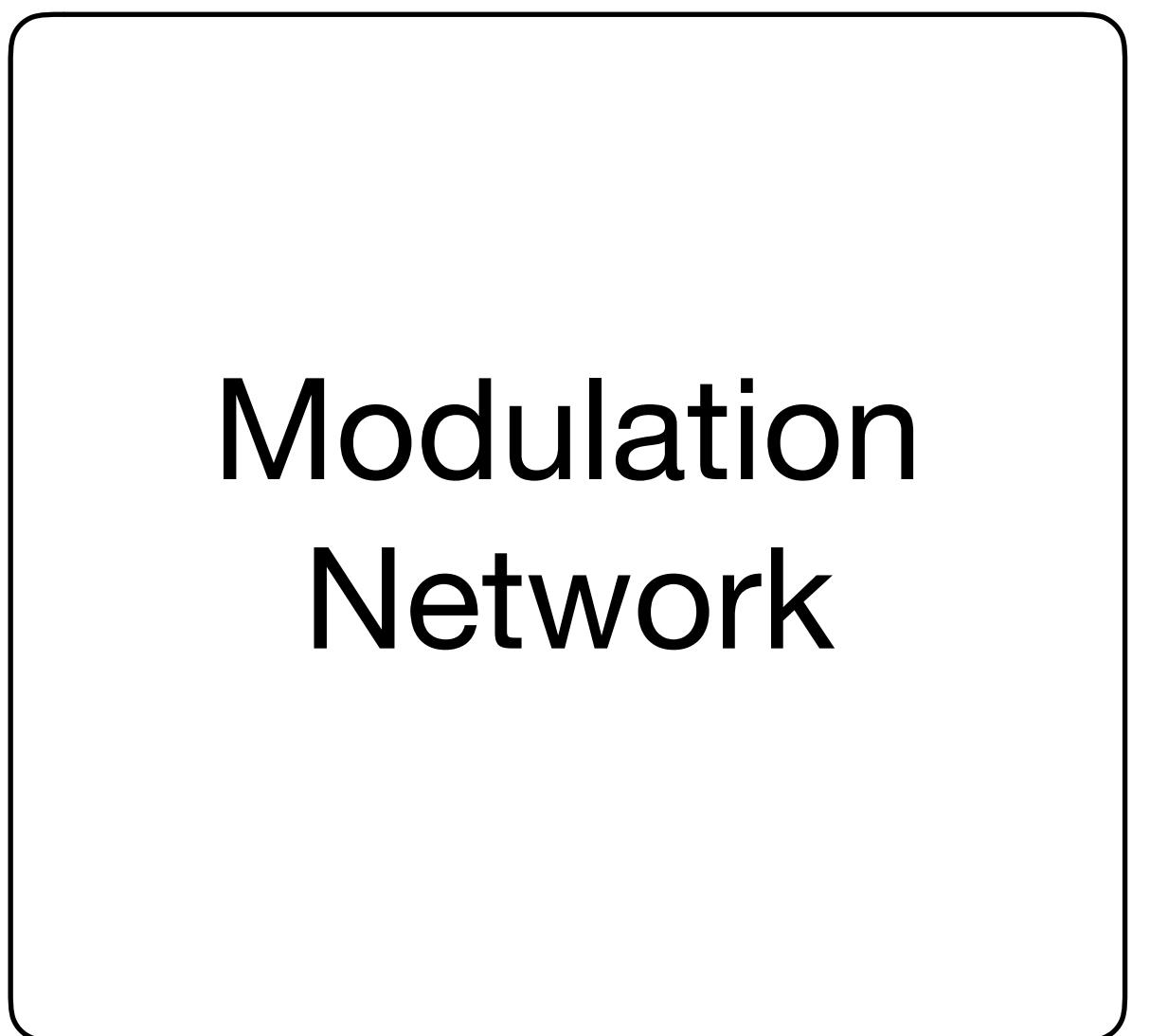
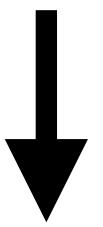
θ_3

Absolute
Value

- Data Sample
- Ground Truth
- MAML (1-mode)
- MAML (3-mode)

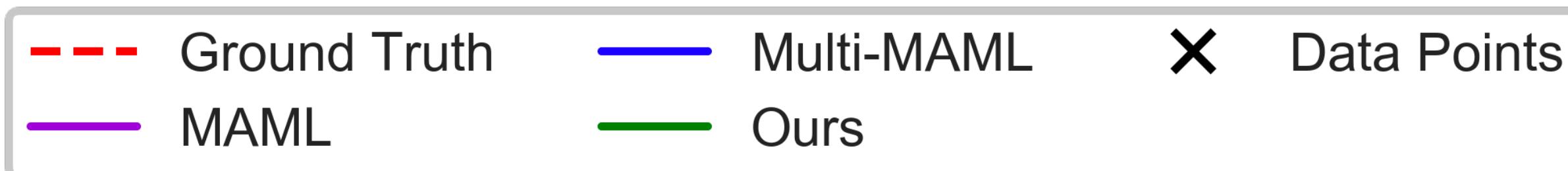
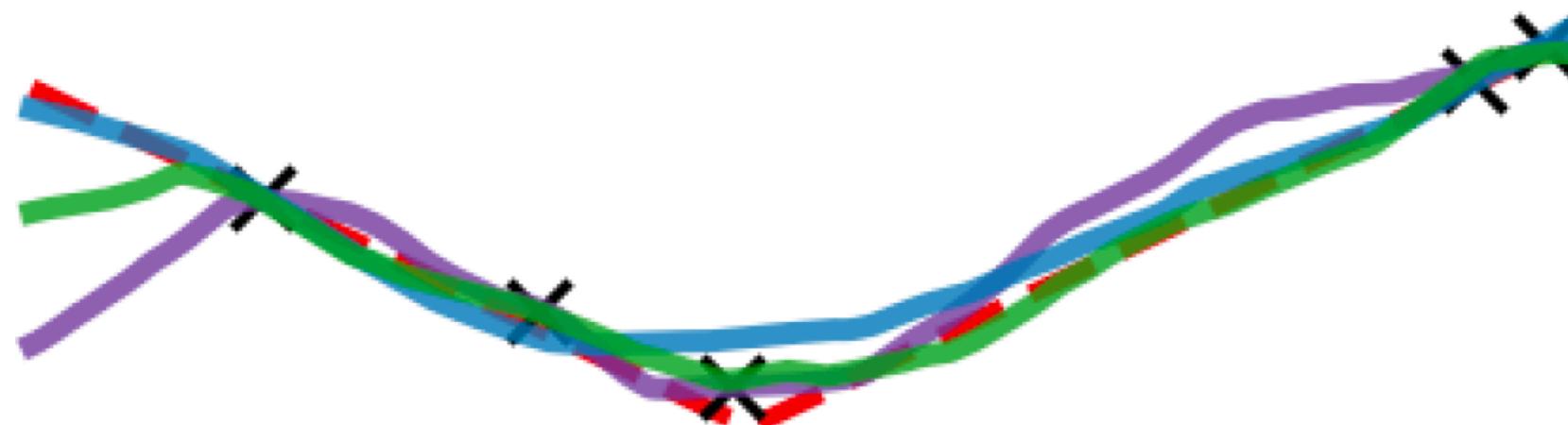
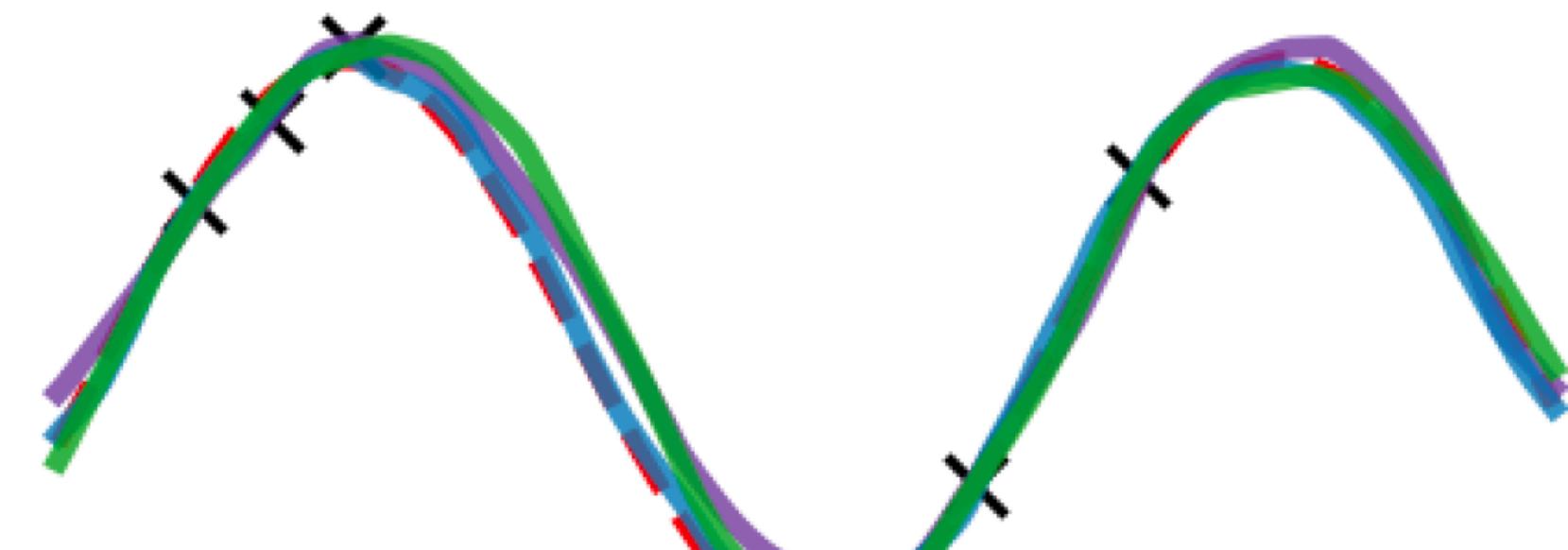


$\left\{ \begin{array}{c} \text{x} \\ \text{y} \end{array} \right\}$ Samples $\times K$

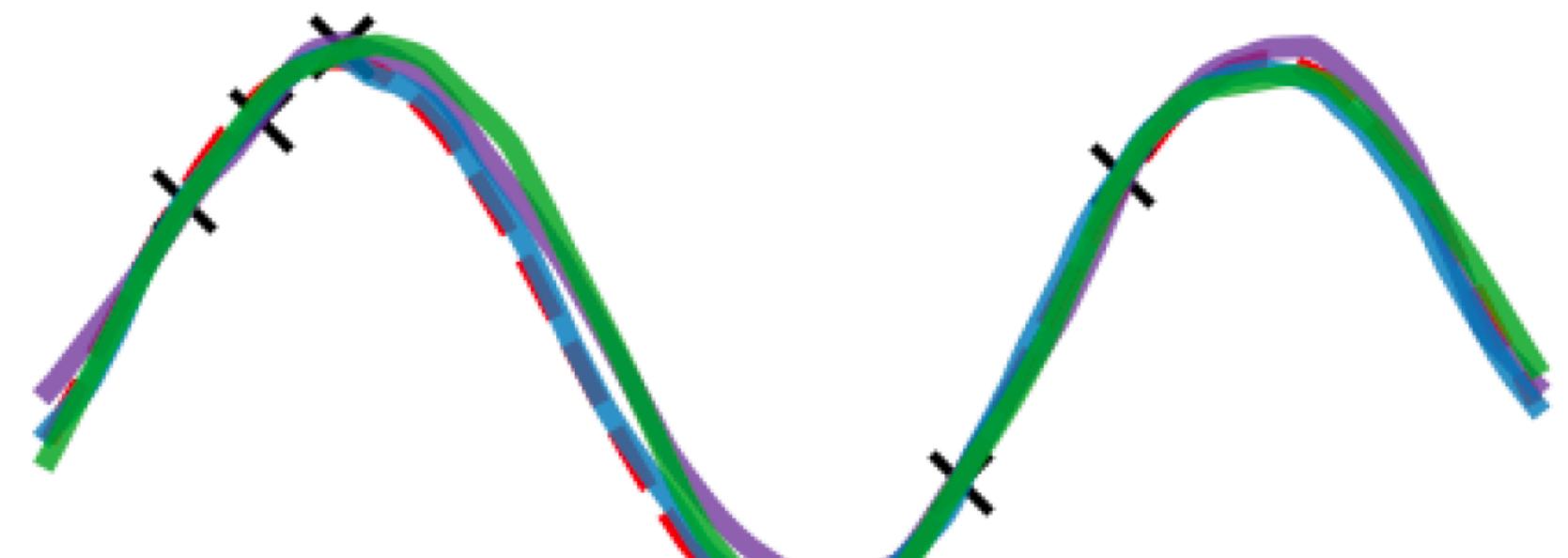


$\hat{\text{y}}$

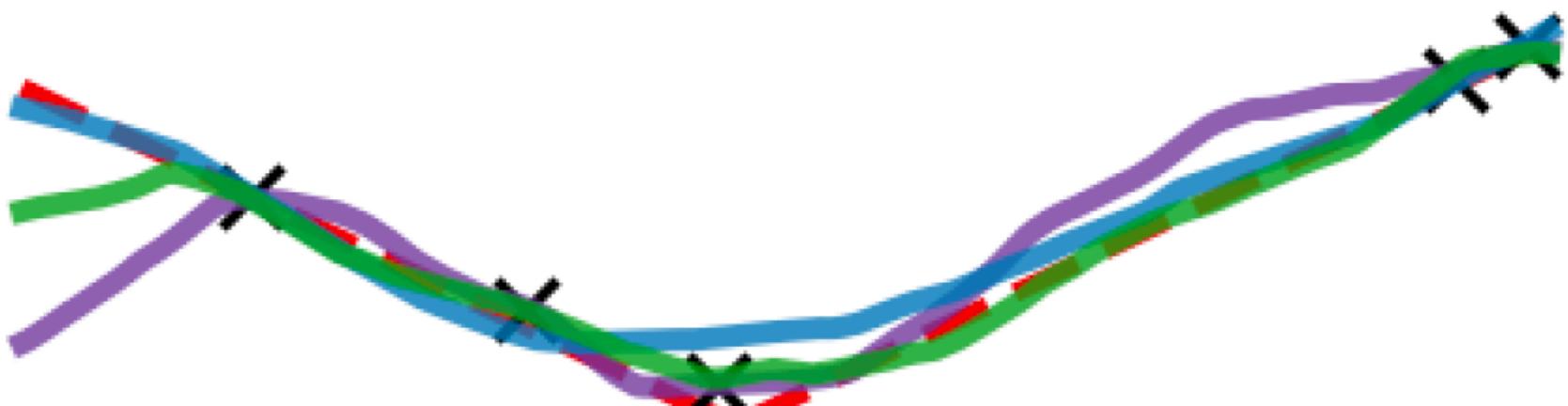
Evaluations: Regression



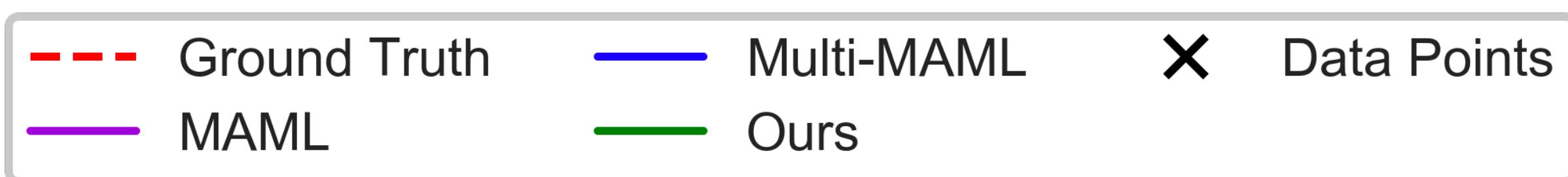
Evaluations: Regression



MAML	1.668
Ours	0.868

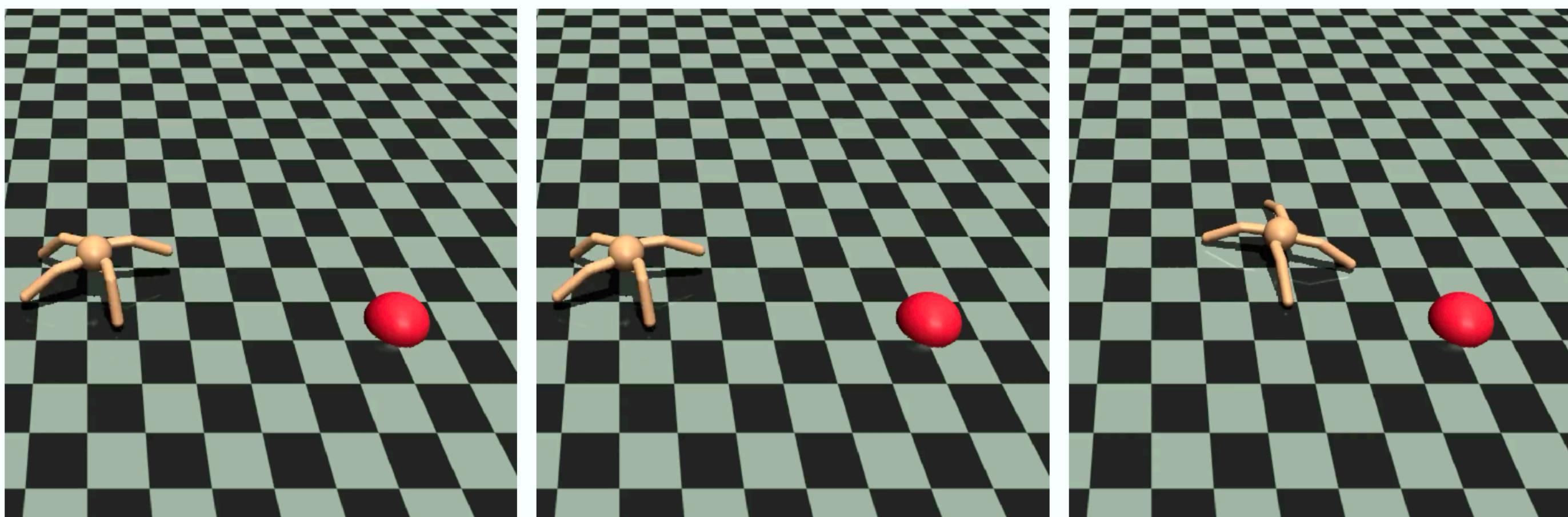


5-Mode Regression
MSE

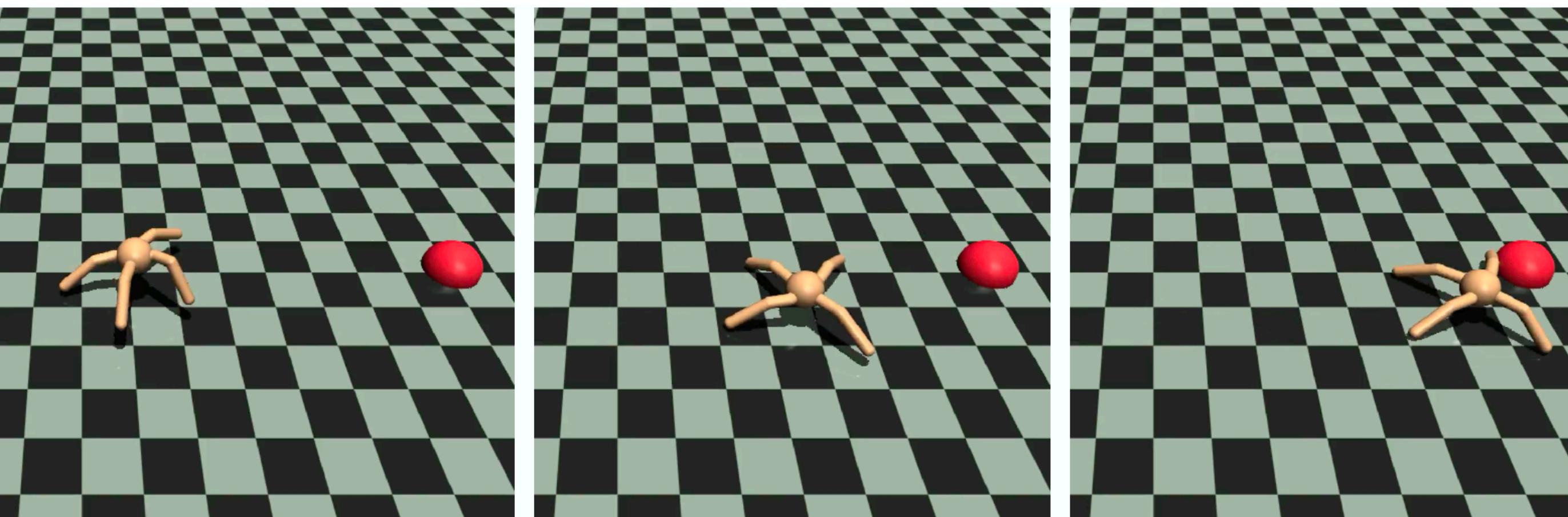


Evaluations: Reinforcement Learning

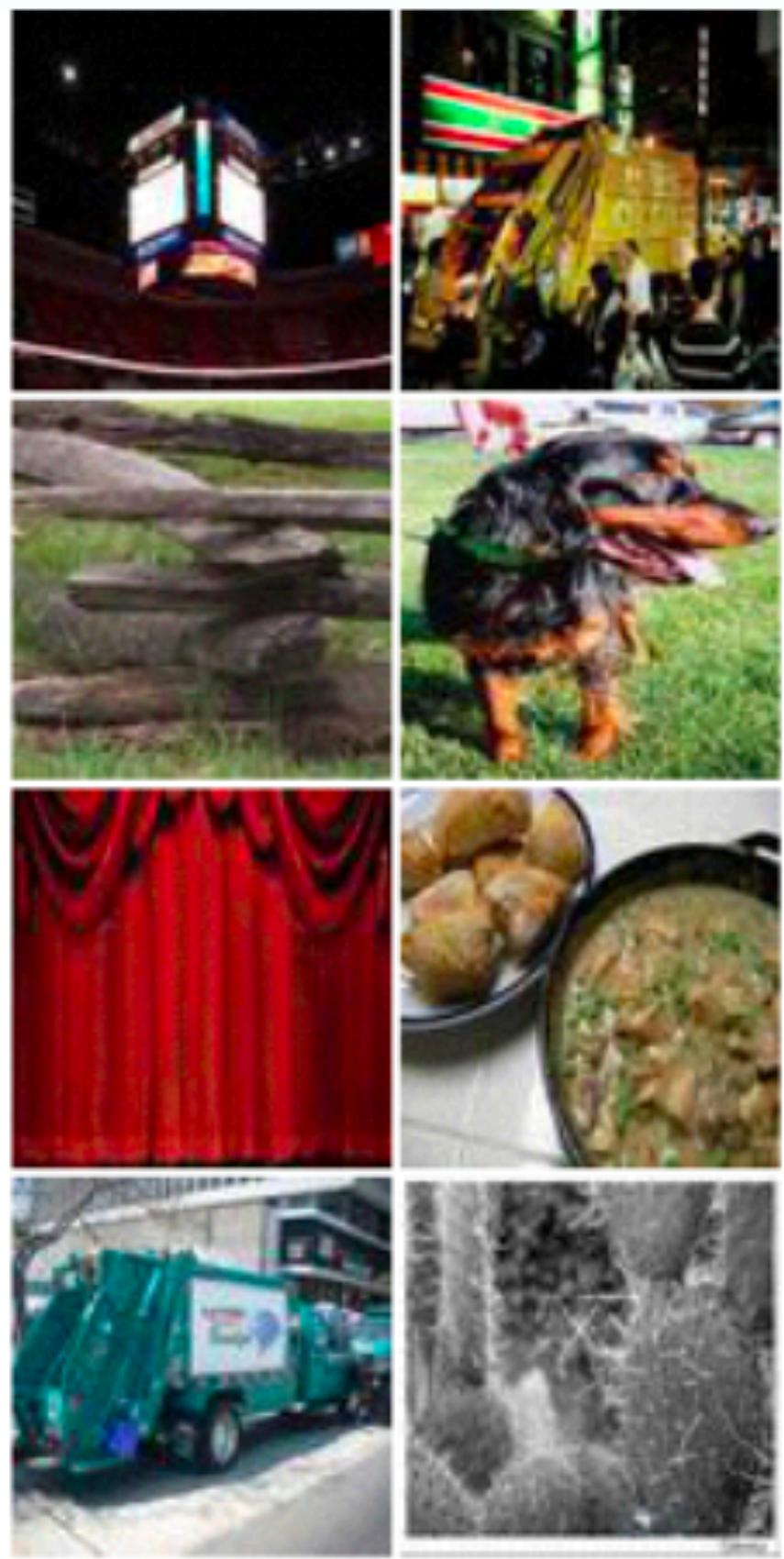
ProMP



Ours

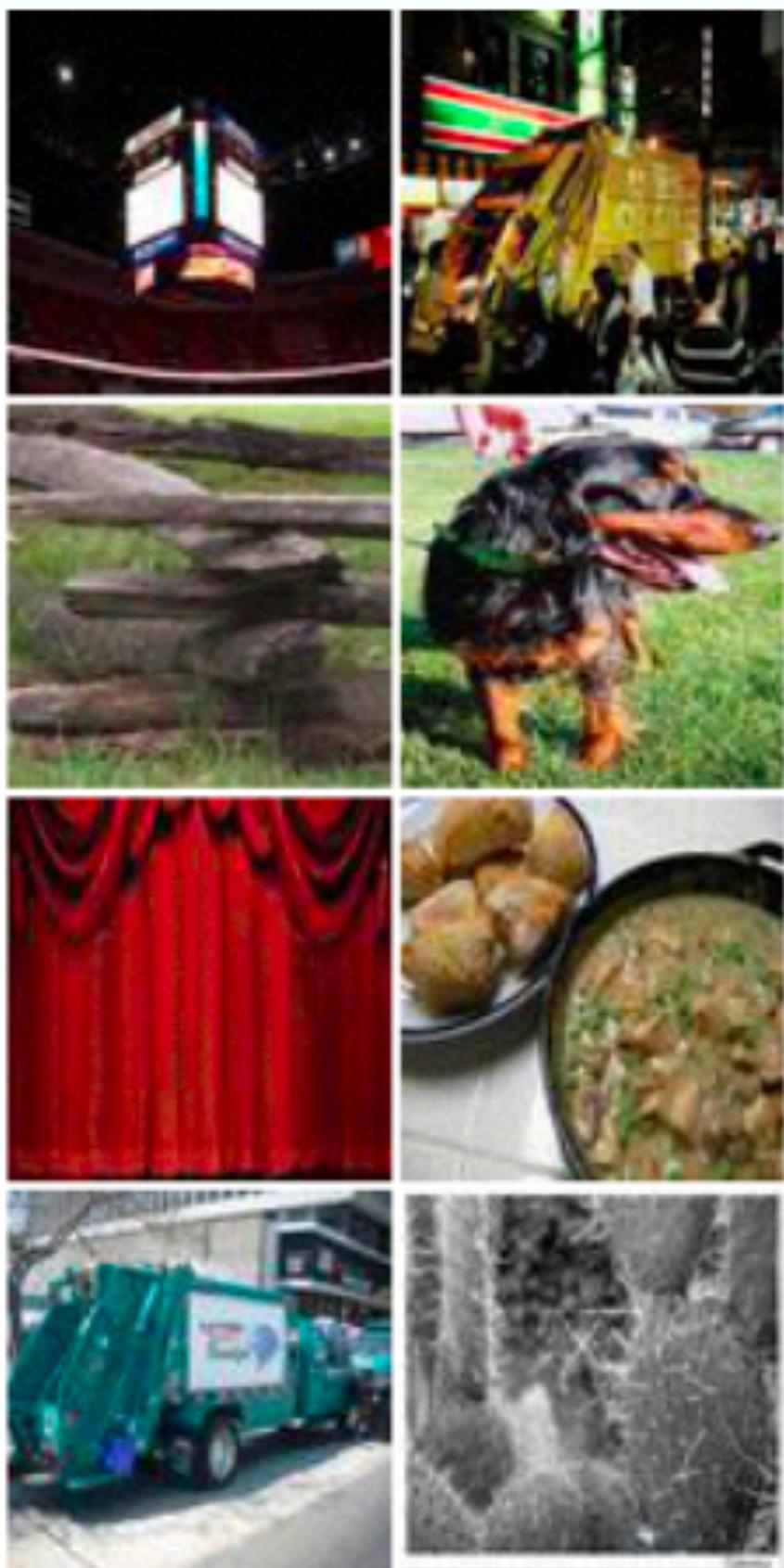


Evaluations: Classification



କେବଳ ଏହି ପାଇଁ
କିମ୍ବା ଏହିରେ
କିମ୍ବା ଏହିରେ
କିମ୍ବା ଏହିରେ
କିମ୍ବା ଏହିରେ

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Evaluations: Classification



କାନ୍ଦିଲ ପାତା
ଚାରୁ ମାତ୍ରା
ଶବ୍ଦ ମାତ୍ରା
ପାତା ମାତ୍ରା
ଗୁରୁ ମାତ୍ରା

MAML	54.41%
Ours	60.83%

5-Way, 5-Shot 5-Mode
Classification