Supplementary Material

Backbone	Experiment	CV			LOCO		
		ACC	**F1**	**GM**	**ACC**	**F1**	**GM**
DenseNet-121	STL^{*1}	66.1(4.3)	65.0(5.2)	66.2(3.8)	61.2(7.5)	53.0(21.3)	59.2(4.2)
	FT	67.3(2.2)	63.1(4.1)	66.9(2.1)	64.2(6.0)	60.9(9.6)	63.1(3.1)
	$MDMT$	**69.9(2.8)**	**69.1(3.4)**	**70.0(2.5)**	**65.6(4.2)**	**65.5(7.0)**	**66.4(3.5)**
DenseNet-161	STL^{*1}	67.4(2.5)	65.8(3.6)	67.4(2.3)	62.1(7.4)	59.5(14.5)	60.3(3.9)
	FT	65.8(3.1)	60.7(3.7)	65.3(2.8)	62.9(8.3)	52.6(22.1)	62.0(5.4)
	$MDMT$	**68.7(2.8)**	**67.0(2.9)**	**68.6(2.4)**	**68.5(6.6)**	**64.8(10.7)**	**67.4(4.8)**
DenseNet-169	STL^{*1}	67.1(2.4)	65.5(3.2)	67.1(2.2)	57.9(9.1)	51.0(26.2)	57.2(4.8)
	FT	67.6(3.6)	64.4(3.9)	67.3(3.2)	64.8(6.3)	62.6(10.1)	62.9(5.5)
	$MDMT$	**68.5(2.5)**	**66.8(2.6)**	**68.4(2.2)**	**65.9(6.3)**	**62.9(11.5)**	**65.8(5.5)**
DenseNet-201	STL^{*1}	66.9(2.2)	64.56(3.3)	66.7(2.0)	63.5(6.8)	61.5(13.2)	61.3(2.3)
	FT	66.3(1.7)	61.0(3.2)	65.7(1.5)	66.0(6.5)	62.6(10.7)	65.0(5.0)
	$MDMT$	**69.2(2.2)**	**66.5(3.4)**	**69.0(2.0)**	**69.5(5.4)**	**68.9(7.3)**	**68.8(4.2)**
EfficientNet-b0	STL^{*1}	65.5(1.8)	62.8(5.5)	65.3(2.0)	59.5(8.1)	56.7(16.4)	59.1(5.3)
	FT	68.5(0.9)	66.2(1.3)	68.4(0.8)	**68.9(5.1)**	**67.5(8.2)**	**68.3(4.0)**
	$MDMT$	**70.1(1.5)**	**68.7(2.2)**	**70.1(1.2)**	66.3(6.4)	65.5(6.5)	67.4(5.3)
EfficientNet-b1-p	STL^{*1}	66.0(3.2)	64.2(2.8)	66.0(2.9)	59.1(7.6)	60.2(12.1)	57.9(4.1)
	FT	**69.0(1.8)**	**67.0(1.9)**	**68.9(1.4)**	**65.7(8.8)**	**60.5(17.7)**	**65.0(6.0)**
	$MDMT$	68.1(0.6)	66.4(2.4)	68.0(0.6)	59.3(12.2)	55.6(16.8)	61.8(6.3)
EfficientNet-es	STL^{*1}	66.0(3.8)	65.6(5.2)	66.2(3.5)	54.8(14.1)	43.9(23.2)	57.8(7.6)
	FT	**68.1(1.7)**	**64.3(2.5)**	**67.8(1.6)**	65.0(5.9)	61.8(10.8)	63.6(4.1)
	$MDMT$	67.9(3.0)	63.7(4.5)	67.5(2.8)	**66.9(4.9)**	**65.5(8.5)**	**66.1(2.4)**
EfficientNet-es-p	STL^{*1}	64.8(3.1)	62.0(5.6)	64.6(3.1)	60.3(9.1)	56.4(19.6)	60.2(5.2)
	FT	67.5(2.5)	61.1(5.1)	66.8(2.5)	64.3(10.7)	58.0(21.7)	63.5(8.0)
	$MDMT$	**68.5(2.3)**	**66.0(2.2)**	**68.3(1.9)**	**67.1(4.5)**	**67.4(5.4)**	**66.7(3.6)**
EfficientNet-lite	STL^{*1}	63.6(2.5)	60.1(5.2)	63.4(2.5)	59.6(8.0)	58.7(8.0)	61.0(6.0)
	FT	68.0(1.7)	64.5(2.3)	67.7(1.6)	**66.1(6.1)**	**62.5(11.4)**	**65.0(3.5)**
	$MDMT$	**68.4(1.6)**	**67.2(3.1)**	**68.4(1.5)**	60.3(5.7)	59.2(5.7)	62.3(3.8)
GoogLeNet	STL^{*1}	65.8(4.1)	63.4(4.7)	65.6(3.7)	62.0(9.9)	55.5(23.2)	60.1(4.8)
	FT	65.8(2.7)	60.9(4.0)	65.3(2.5)	64.3(5.3)	58.0(13.1)	64.0(4.5)
	$MDMT$	**68.1(3.1)**	**66.4(3.6)**	**68.0(2.8)**	**66.8(6.0)**	**64.4(11.4)**	**66.6(5.1)**
MobileNet	STL^{*1}	66.6(3.1)	63.7(3.6)	66.3(2.8)	62.5(4.8)	61.6(13.5)	59.7(3.7)
	FT	68.9(1.5)	65.8(1.3)	68.6(1.3)	**67.5(5.6)**	66.5(8.6)	**66.3(4.4)**
	$MDMT$	**69.1(1.7)**	**67.2(2.0)**	**69.0(1.4)**	**67.5(7.2)**	**66.3(9.4)**	66.7(6.3)
ResNet-18	STL^{*1}	66.6(3.1)	63.7(3.6)	66.3(2.8)	64.4(7.4)	62.4(12.6)	61.6(3.6)
	FT	66.7(3.0)	62.3(3.9)	66.3(2.7)	64.5(5.6)	56.0(15.4)	62.9(3.6)
	$MDMT$	**68.5(2.7)**	**67.7(3.4)**	**68.6(2.5)**	**67.1(6.9)**	**66.6 (9.4)**	**67.2(5.2)**
ResNet-34	STL^{*1}	67.0(2.1)	64.4(3.9)	66.8(2.1)	61.2(7.8)	49.8(21.7)	58.5(3.4)
	FT	66.9(2.5)	62.5(3.9)	66.5(2.3)	**64.2(6.5)**	56.6(18.8)	63.4(4.4)
	$MDMT$	**69.3(2.7)**	**66.8(1.6)**	**69.1(2.2)**	63.3(9.5)	**60.4(10.8)**	**64.9(6.8)**
ResNet-50	STL^{*1}	67.2(4.2)	65.2(3.7)	**67.1(4.0)**	**65.2(8.7)**	**67.1(9.6)**	63.2(5.7)
	FT	66.4(2.2)	61.7(2.4)	65.9(1.9)	63.2(9.6)	53.7(25.8)	62.1(6.8)
	$MDMT$	**67.2(2.2)**	**65.6(1.7)**	**67.1(1.7)**	64.1(3.9)	61.6(8.4)	**65.6(3.9)**
ResNet-101	STL^{*1}	66.2(1.5)	63.6(2.2)	66.0(1.0)	61.7(9.2)	54.6(20.6)	59.2(4.3)
	FT	67.1(2.6)	60.8(3.4)	66.4(2.3)	62.1(8.4)	49.1(23.5)	60.4(4.9)
	$MDMT$	**69.5(1.9)**	**68.0(2.6)**	**69.5(1.7)**	**67.1(9.9)**	**65.6(12.1)**	**66.6(7.0)**
ShuffleNet-v2-x0	STL^{*1}	65.9(2.0)	63.3(3.4)	65.7(2.0)	61.9(8.0)	61.8(12.1)	61.34(4.1)
	FT	**68.2(1.5)**	64.0(3.1)	**67.8(1.5)**	64.9(5.9)	62.7(9.5)	64.0(3.4)
	$MDMT$	67.8(1.2)	**64.7(1.6)**	67.5(1.1)	**66.2(6.0)**	**66.0(7.9)**	**65.8(3.7)**
ShuffleNet-v2-x1	STL^{*1}	64.1(3.3)	62.4(5.0)	64.0(3.0)	62.4(6.8)	63.1(12.6)	62.9(3.8)
	FT	67.8(1.5)	63.2(1.5)	67.3(1.3)	65.2(8.9)	56.7(21.9)	64.5(6.7)
	$MDMT$	**68.8(2.1)**	**66.9(3.8)**	**68.7(2.1)**	**65.5(6.0)**	**66.0(8.2)**	**65.8(4.5)**
Wide-ResNet50-2	STL^{*1}	65.6(2.4)	65.2(2.4)	65.8(2.0)	61.6(6.5)	54.8(14.9)	61.2(3.6)
	FT	66.0(2.2)	61.4(2.2)	65.6(1.9)	63.1(9.8)	52.0(26.6)	61.8(6.7)
	$MDMT$	**66.3(1.9)**	**64.9(1.5)**	**66.3(1.6)**	**66.1(4.7)**	**66.0(8.4)**	**65.9(3.6)**

Table S1. Model performance metrics on task τ_1, including mean and standard deviation across folds, for the experiments and validation approaches.