

- Table S1: Detection Metrics:

- a. PM detection metrics

	TPR	TNR	Precision	F1	Y
PM detection	0,8108	0,8125	0,6532	0,7185	1,6680

- b. Classification metrics

- True Positive Rate

	Universal	DC brushed	AC sync	AC async
Universal	0,8667	0	0,0667	0,0667
DC brushed	0,0968	0,6129	0,2581	0,0323
AC sync	0,0625	0,0469	0,8281	0,0625
AC async	0,2917	0,125	0,125	0,4583

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	Universal	DC brushed	AC sync	AC async
Universal	1,749	0,7899	0,5289	0,9322
DC brushed	0,7832	1,5621	0,7665	0,8882
AC sync	0,639	0,7881	1,6752	0,8978
AC async	1,0277	0,949	0,621	1,4023

- F1 Score

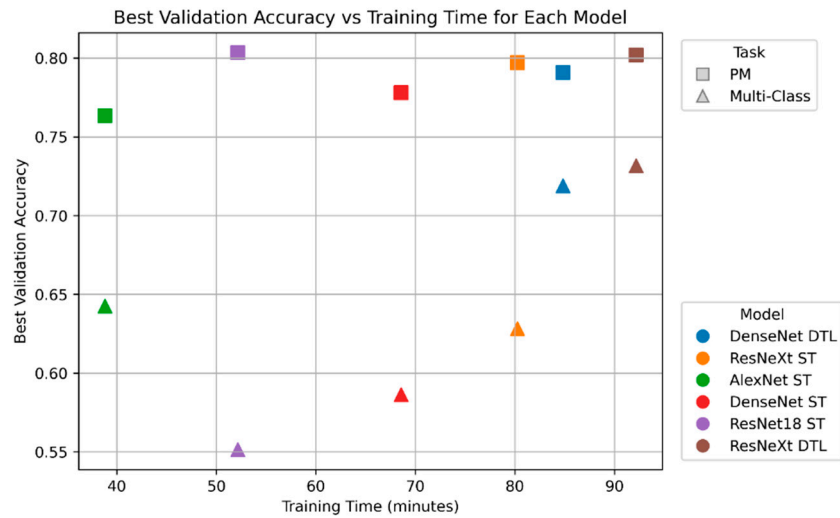
	Universal	DC brushed	AC sync	AC async
Universal	0,7429	0	0,0417	0,0833
DC brushed	0,0845	0,6786	0,1649	0,0408
AC sync	0,0769	0,0674	0,8154	0,0976
AC async	0,2187	0,1224	0,0667	0,5238

- Precision

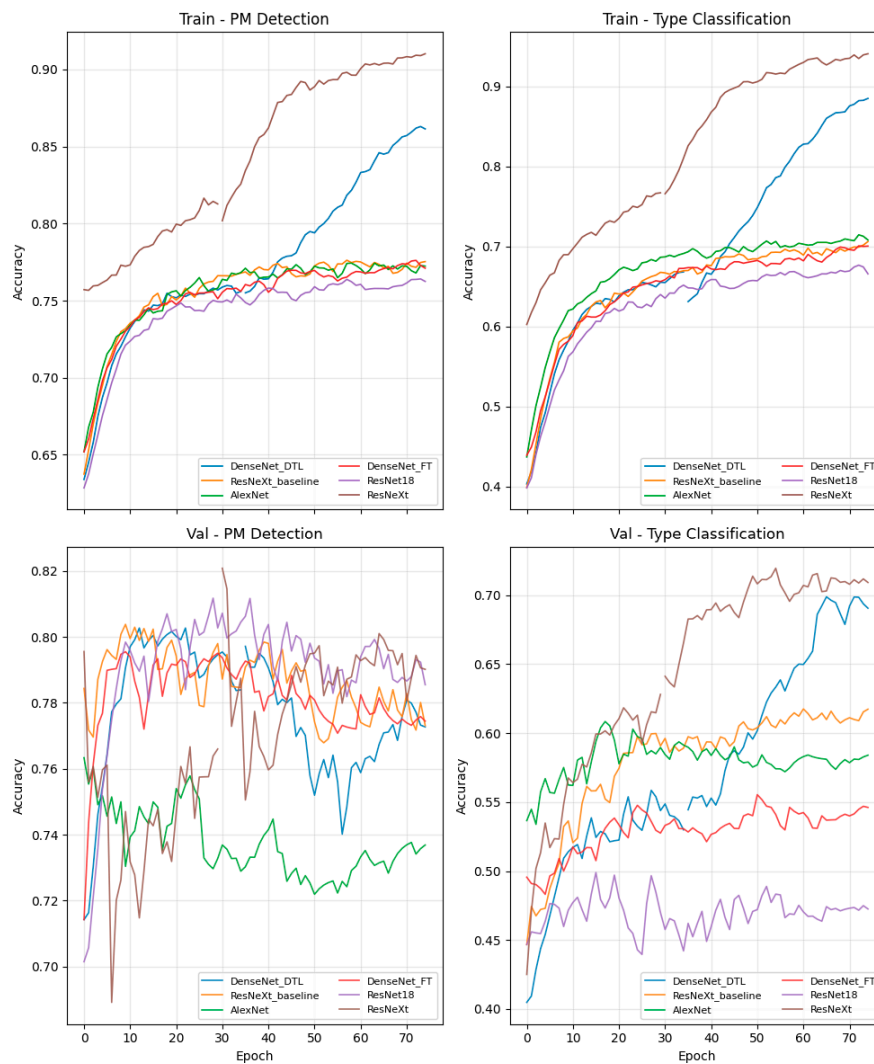
	Universal	DC brushed	AC sync	AC async
Universal	0,65	0	0,0303	0,1111
DC brushed	0,075	0,76	0,1212	0,0556
AC sync	0,1	0,12	0,803	0,2222
AC async	0,175	0,12	0,0455	0,6111

- Figure S1: Model Performance comparison

a. Validation accuracy vs. training time for each model.

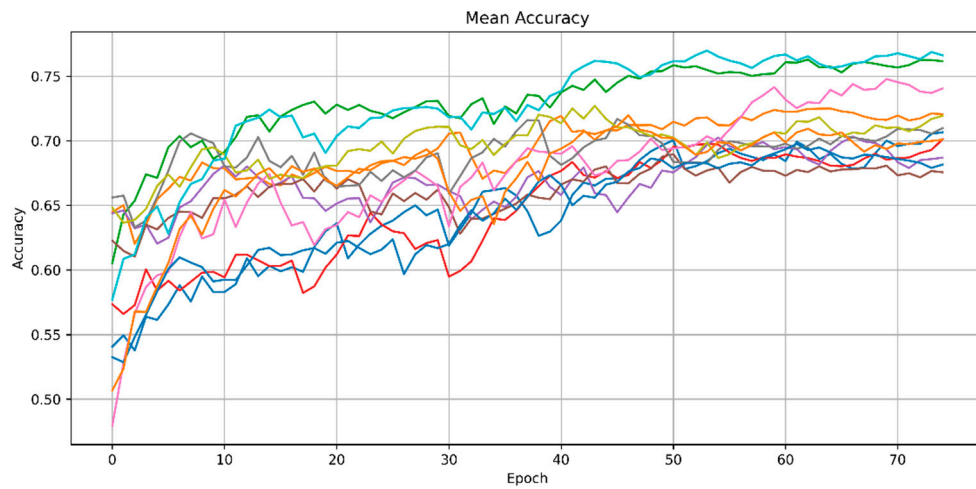


b. Training and validation accuracy per epoch for each model.



- Figure S2 Model cross-validation

a. Mean accuracy per epoch across different random seeds used for train-test splitting.



b. Distribution of accuracy across multi-class and binary tasks over all training runs.

