Supplementary Information of "Machine learning a million cycles as 2D images from practical batteries for electric vehicle applications"

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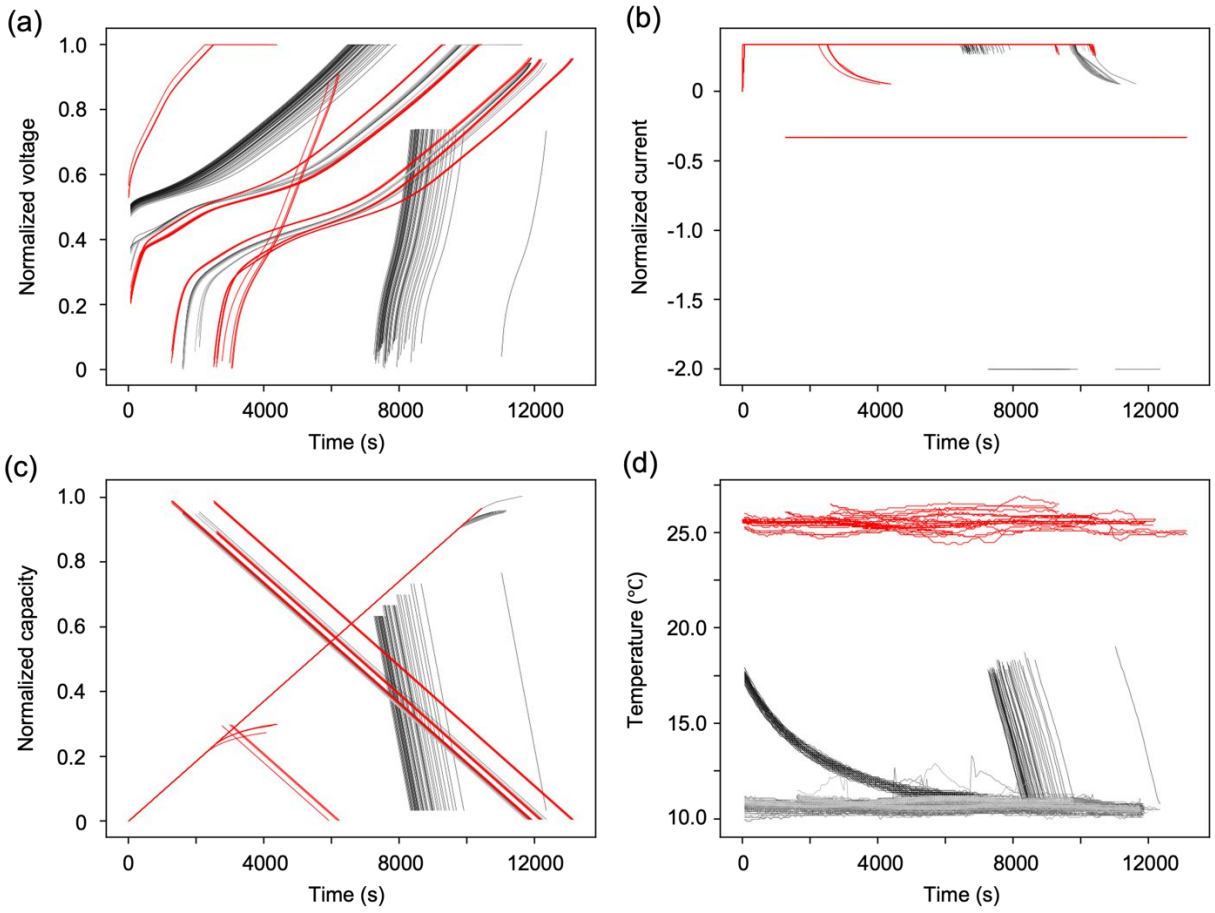

Figure S1. Profile of (a) normalized cycling voltage curve, (b) normalized current (c) normalized capacity and (d) cell temperature from an example battery tested for 1000 cycles. Darker curves correspond to later cycles. Red curves are from the Reference Performance Tests.

Input features	Total feature length	Training error	Test error
1 cycle	32	0.021	0.093
1 cycle	64	0.021	0.102
1 cycle	33 (+Q)	0.020	0.087
1 cycle	35 (+Q+T)	0.019	**0.084**
1 cycle only Q	1	0.037	0.173
1 cycle only T	2	0.029	0.129
Stacking 3 cycles	105 (+Q+T)	0.018	0.069
Stacking 10 cycles	350 (+Q+T)	0.016	**0.066**

Table S1. Result of the prediction of capacity decreasing rate (remaining useful life).

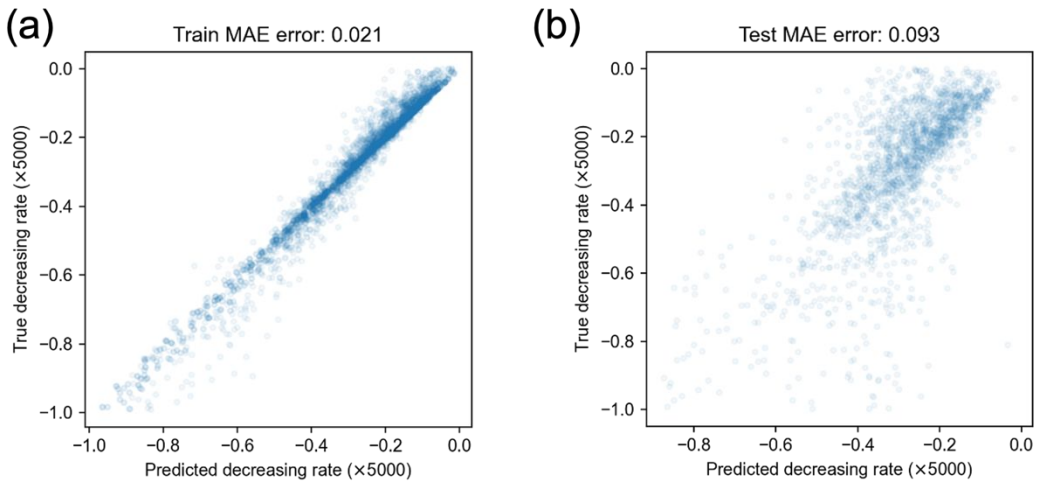

Figure S2. Per example training (a) and test (b) error of RPT capacity decreasing rate prediction.