

Readme

This dataset consists of four databases:

- (1) Trip metadata
- (2) EV field data
- (3) Charging curves
- (4) Capacity tests

While database (1) represents an aggregated database of the EV operation in the form of trip data, databases (2) to (4) are time series measurements. The databases with their signals are described in Table 1. Please refer to the journal paper “Battery Electric Vehicles in Commercial Fleets: Use profiles, battery aging, and open-access data” (<https://doi.org/10.1016/j.est.2024.111030>) at the Journal of Energy Storage for an analysis and discussion of this dataset.

Table 1: Overview of the collected databases

Database	Signal/Parameter	Unit
(1) Trip metadata with 27,315 trips	Start time	CET
	Duration	s
	Odometer Start	km
	Distance	km
	Max. speed	km/h
	Start SOC	%
	End SOC	%
	Avg. ambient temperature	°C
	Trip ID	1
	Vehicle ID	-
	Fleet type	-
(2) EV field data with 33.9M datapoints	Battery voltage	V
	Battery current	A
	Battery power	W
	Battery SOC	%
	Speed	km/h
	Odometer	km
	Ambient temperature	°C
(3) Charging curves with 511k datapoints	Battery voltage	V
	Battery current	A
	Battery power	kW
	Battery SOC	%
	Grid power (AC)	kW
(4) Capacity tests with 98.7M datapoints	Battery voltage	V
	Battery current	A
	Battery power	W
	Battery SOC	%
	Speed	km/h
	Odometer	km
	Grid power (AC)	W
	Test number	1
	Test direction	1
	Ambient Temperature	°C

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