



iRasus

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Energy Intelligence for a Greener World



About

Our relationship with energy is changing—electrification, decarbonization, efficiency, availability and accessibility.

Irasus builds high-tech digital solutions to accelerate the adoption of low-carbon energy technologies by enhancing safety, reliability and affordability of EV and ESS products.

We bring specialized domain expertise in battery technology, digital transformation and high-tech product development.





About

2019

Working with leading companies
in the EV & ESS industry
for 5 years

10000+

5B+ data points across 10K+
assets

800+

High velocity, high granularity, battery-
agnostic IoT data collection delivers 800+
parameters every second

Accelerating the low carbon transition by making batteries safe, reliable, and affordable



Public Transport & Shared Mobility Drive EV





Power & Public Transport are Essential Services





**Delivering Safe, Reliable and Affordable service
is a common theme for both
transportation and power distribution utilities**





Depot in Delhi for 12- metre electric bus



**250-300
kWh**

Capacity per bus

**200-300
km**

Range at full charge

150:30

Ratio of buses to chargers

300 kW

Max power DC fast charger

9 MW

Depot's peak load

1970

E-Buses in Delhi on 31/07/24



Electric bus chargers
have dedicated
power infra that can
become flexible
energy resources
tomorrow



Zero unscheduled grid connectivity for EVs & chargers

Grid services provided by EVs i.e. V2G





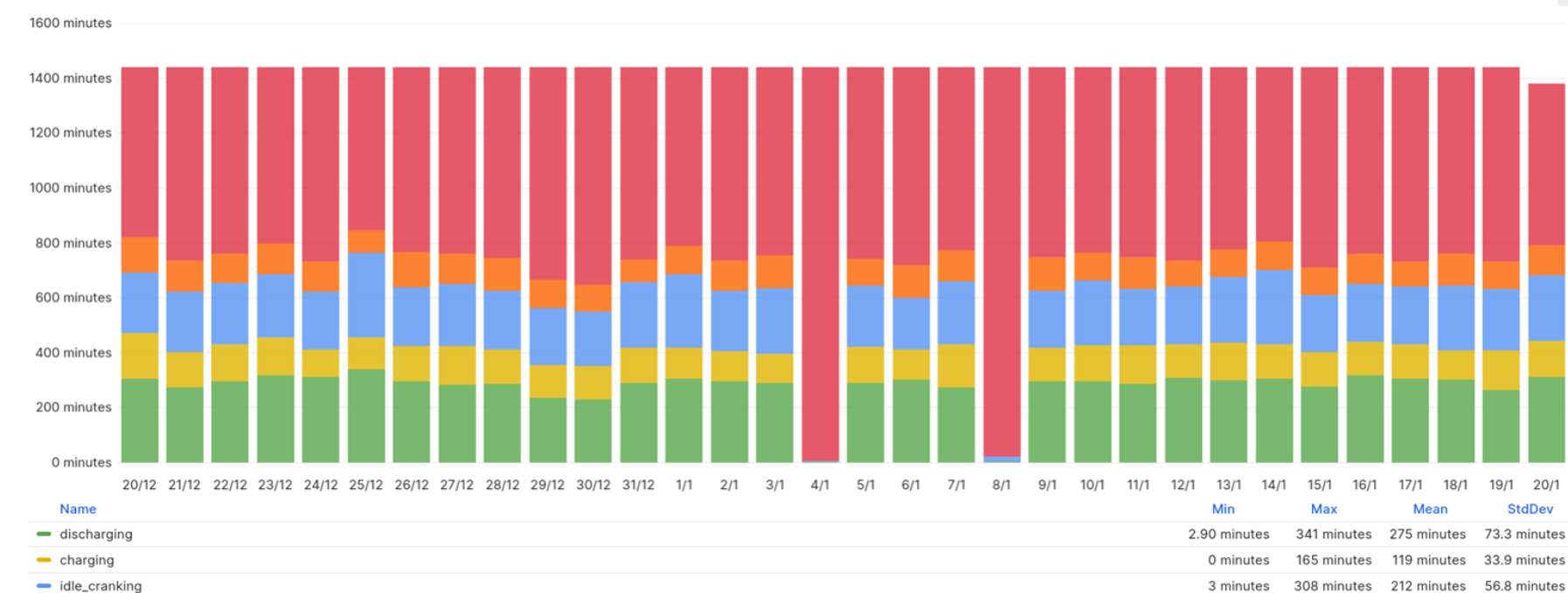
We solve for safety and reliability problems in batteries of EVs and ESS today to enable them to become energy resources for tomorrow's grid providing valuable demand-side management



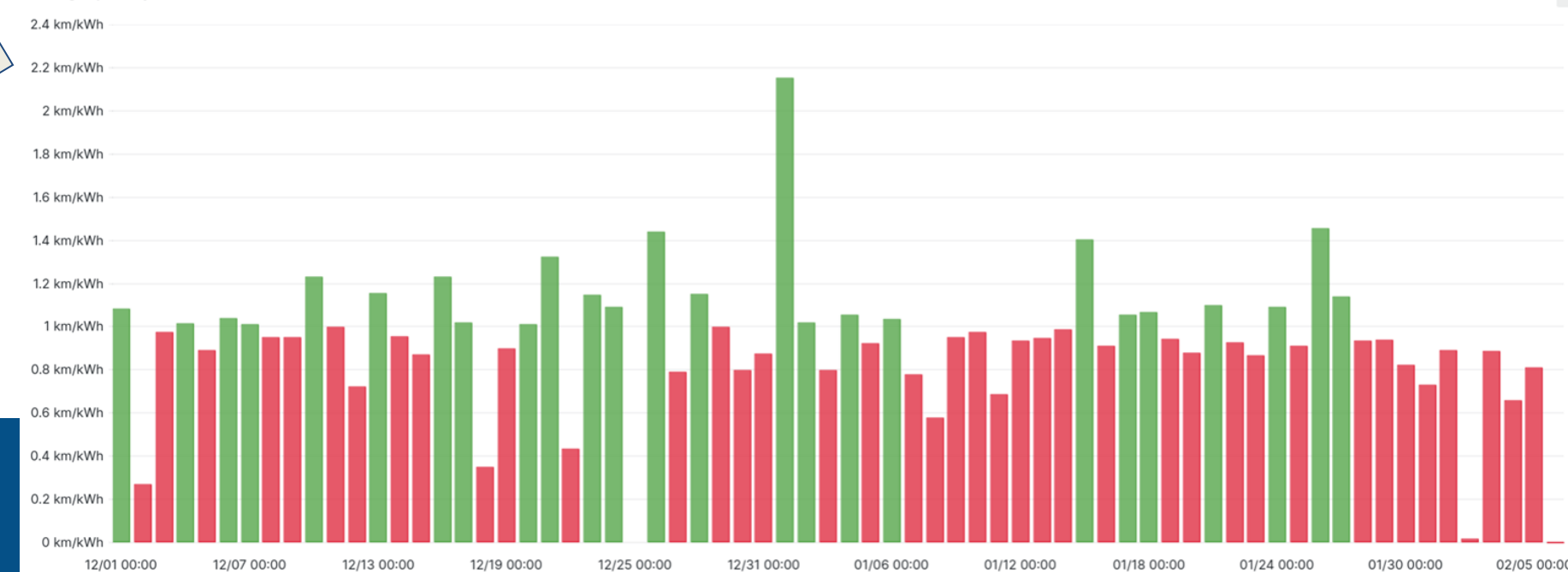
Determining EV/ESS Operations KPIs

- State Duration i.e. duration of discharge, charge, idle
- Uptime
- Charging (or) Round-Trip Energy Efficiency in %
- Mileage in km/kWh or kWh/km
- Quantum of regenerative braking

State Duration (per day)



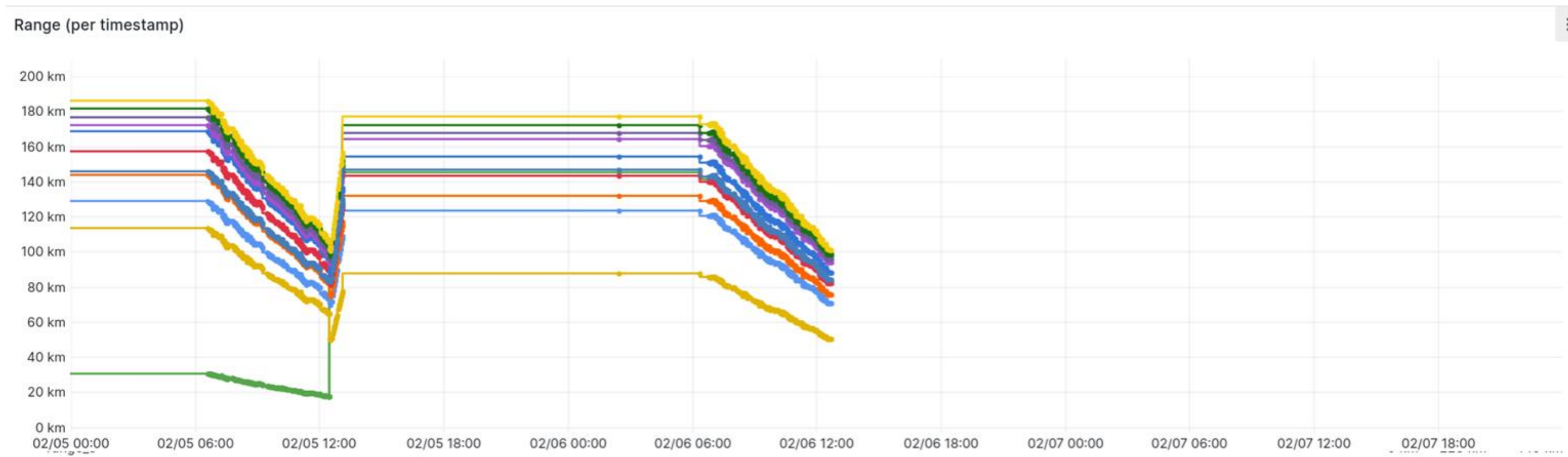
Mileage (per day)





Predicting EV/ESS Operations KPIs

- Remaining Useful Life
- Remaining Range in the Cycle



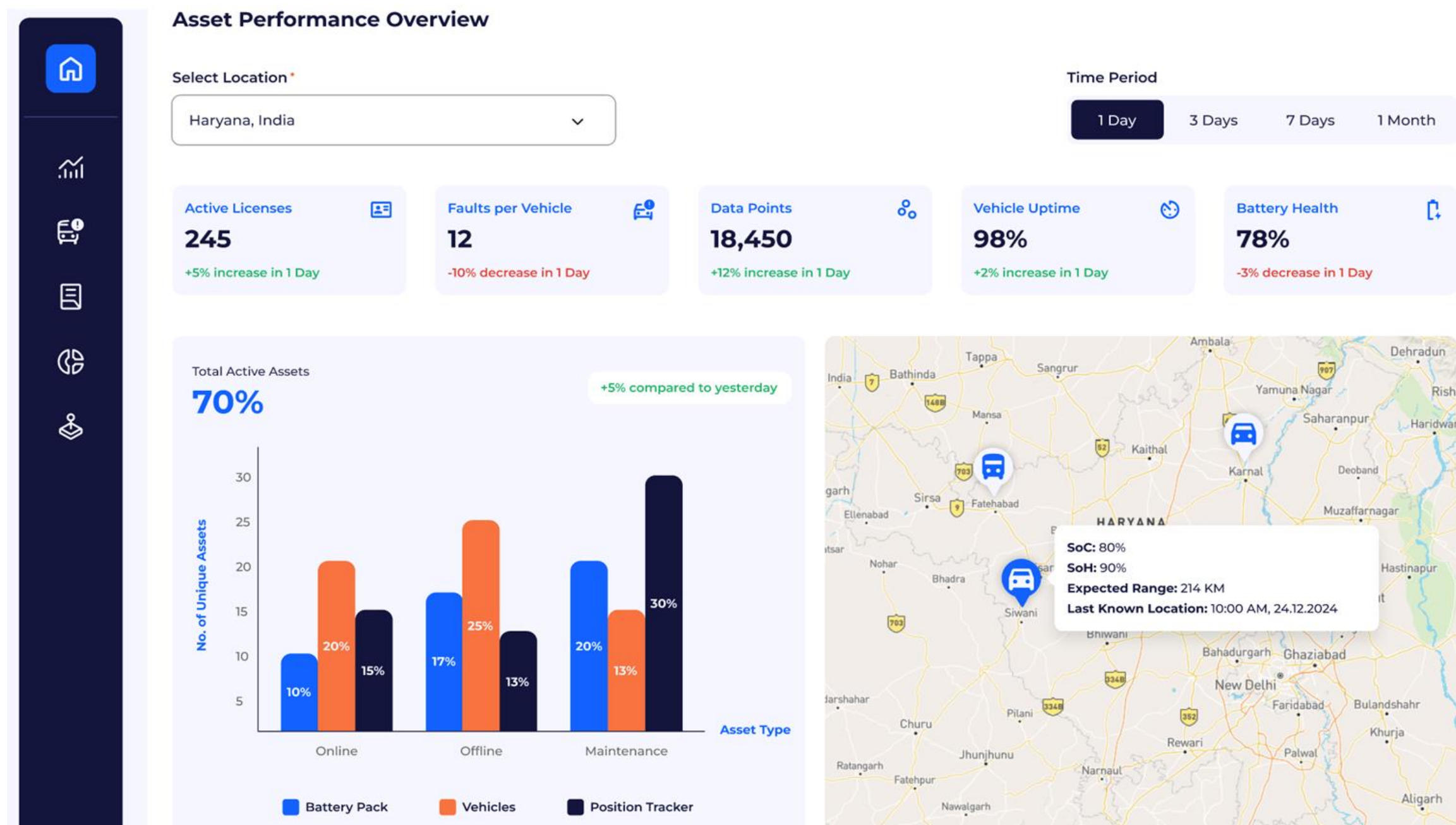


Key Features - I

Battery Health Metrics

Remote Diagnostics & Alerts

Location and Geofencing

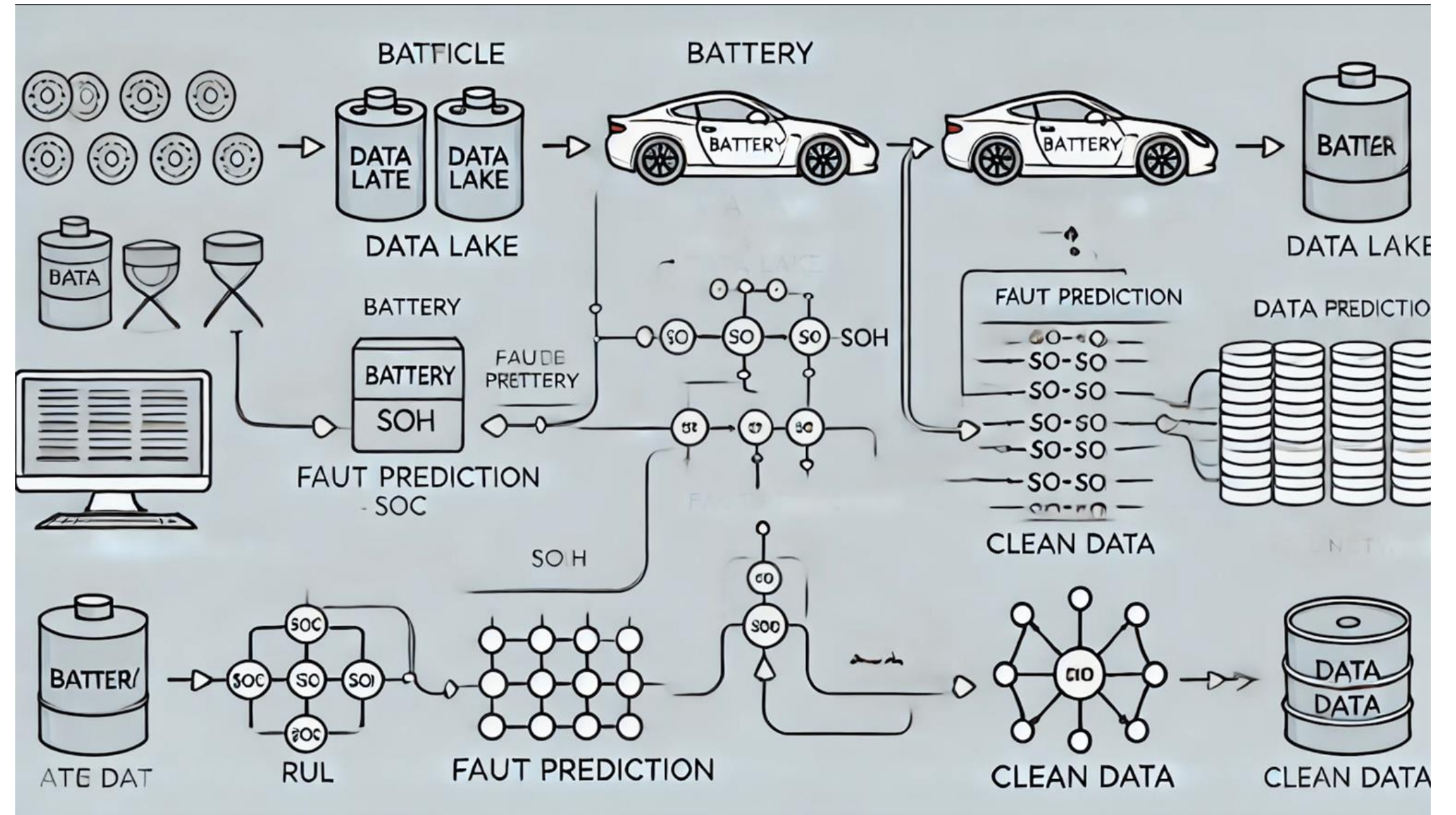


Key Features - II

AI Models

API Integration

Reporting & Analytics





Case Study - Ecobolt electric buses

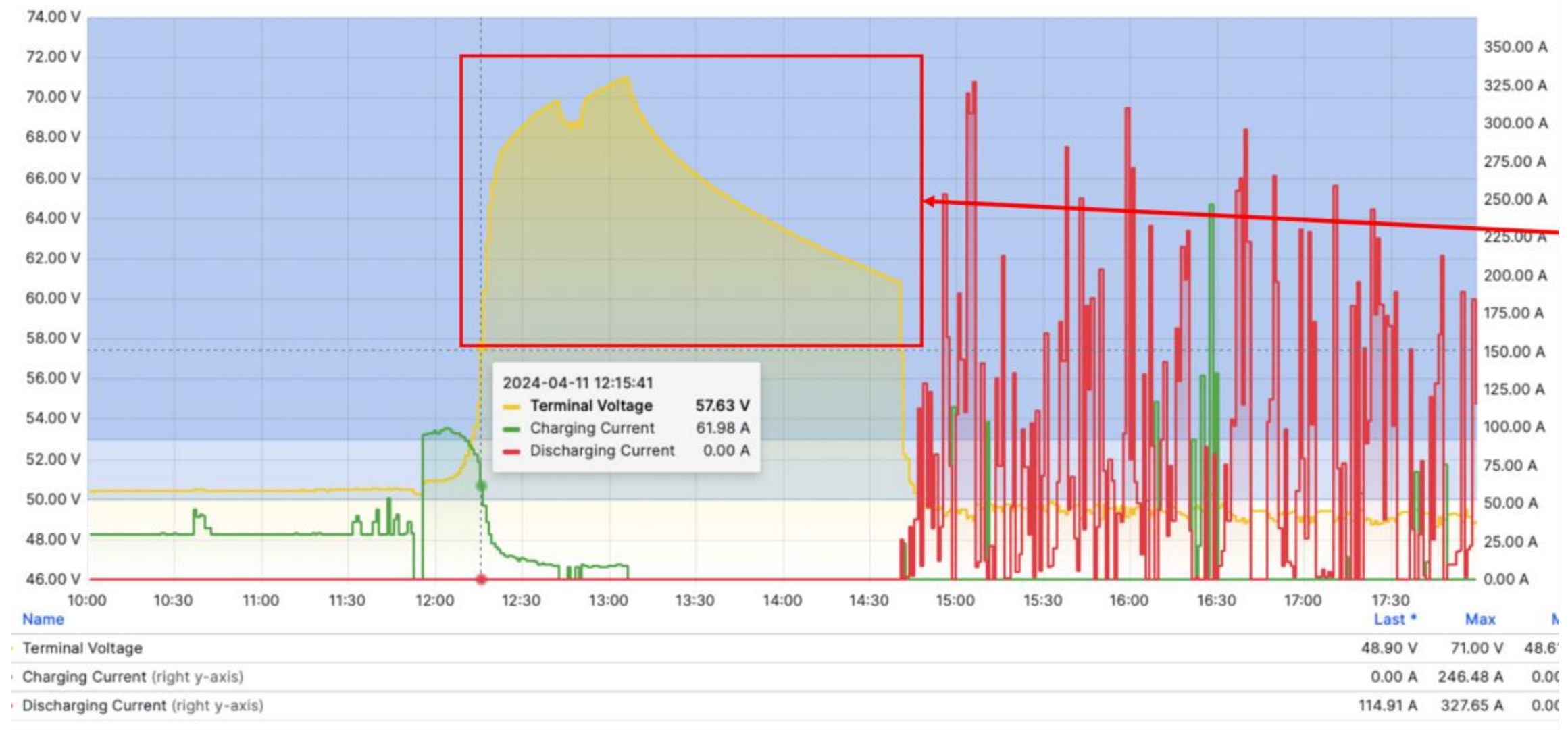
- Provides visibility of battery & EV faults
- Reduced Turnaround Time (TAT) for fault resolution by **30%**
- Real-time alerts and assistance on narrowing down the root cause reduced fault occurrence by **20%**

imei	bus_type	bus_number	timestamp	depot	city	assis_number	fault_code	fault_level	fault_description	fault_duration
3.53E+14	Type 1, 09M	KA41D250	2024-11-12 09:57:44	Yeshwanth	Bangalore	M2701B33	35	2	thermal-management-system-	14 hour(s) ago
3.53E+14	Type 1, 12M	DL51GD41	2024-11-12 14:59:40	Rohini	Delhi	M2701B35	25	3	middle-CAN-abnormal-comm	9 hour(s) ago
3.53E+14	Type 1, 12M	DL51GD32	2024-11-12 00:27:09	RAJGHAT	Delhi	M2701B35	15	1	battery-temperature-differenc	23 hour(s) ago
3.53E+14	Type 1, 12M	TS07UL926	2024-11-12 20:04:10	INDIGO AIR	Hyderabad	M2706B17	35	2	thermal-management-system-	3 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV450	2024-11-12 23:01:12	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	59 minutes ago
3.53E+14	Type 1, 12M	TS07UL926	2024-11-12 05:30:35	INDIGO AIR	Hyderabad	M2706B17	22	1	SOC-jump	18 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV328	2024-11-12 01:06:29	Rohini 2	Delhi	M2701B36	35	2	thermal-management-system-	22 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV413	2024-11-12 22:28:04	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	1 hour(s) ago
3.53E+14	Type 1, 12M	KA50B3734	2024-11-12 00:00:00	INDIGO AIR	Bangalore	M2706B17	22	1	SOC-jump	43 seconds ago
3.53E+14	Type 1, 12M	KA50B3734	2024-11-12 06:23:48	INDIGO AIR	Bangalore	M2706B17	34	1	thermal-management-system-	17 hour(s) ago
3.53E+14	Type 1, 12M	KA50B3734	2024-11-12 11:35:55	INDIGO AIR	Bangalore	M2706B17	35	2	thermal-management-system-	12 hour(s) ago
3.53E+14	Type 1, 12M	KA50B3734	2024-11-12 12:27:44	INDIGO AIR	Bangalore	M2706B17	25	3	middle-CAN-abnormal-comm	11 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV288	2024-11-12 00:55:00	Rohini 2	Delhi	M2701B36	35	2	thermal-management-system-	23 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV321	2024-11-12 01:27:10	Rohini 2	Delhi	M2701B36	7	1	cell-voltage-difference	22 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV419	2024-11-12 15:29:32	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	8 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV432	2024-11-12 00:38:09	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	23 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV324	2024-11-12 23:02:41	Rohini 2	Delhi	M2701B36	35	2	thermal-management-system-	58 minutes ago
3.53E+14	Type 2, 12M	DL51EV412	2024-11-12 18:42:43	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	5 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV327	2024-11-12 05:19:15	Rohini 2	Delhi	M2701B36	35	2	thermal-management-system-	18 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV432	2024-11-12 04:55:04	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	19 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV459	2024-11-12 15:20:33	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	8 hour(s) ago
3.53E+14	Type 2, 12M	GJ05CW48	2024-11-12 08:31:05	Bhestan De	Surat	M2701B33	35	2	thermal-management-system-	15 hour(s) ago
3.53E+14	Type 1, 09M	KA41D274	2024-11-12 00:48:00	KR Puram C	Bangalore	M2701B33	35	2	thermal-management-system-	23 hour(s) ago
3.53E+14	Type 2, 12M	DL51EV413	2024-11-12 19:27:15	Burari Depo	Delhi	M2701B36	35	2	thermal-management-system-	4 hour(s) ago
3.53E+14	Type 1, 09M	MH43CE95	2024-11-12 05:46:08	Marol	Mumbai	M2701B33	15	1	battery-temperature-differenc	18 hour(s) ago
3.53E+14	Type 2, 12M	GJ05CW66	2024-11-12 18:21:08	Pal Depot	Surat	M2701B34	25	3	middle-CAN-abnormal-comm	5 hour(s) ago



Case Study - leading 3-wheeler EV battery OEM

- Provides visibility of 360° battery behaviour
- Reduced illegitimate warranty claims by **70%** within 5 months
- Eliminated need to roster service/maintenance personnel to remote client sites





Get in touch

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