

SAP BDC Use Case – SAP Databricks

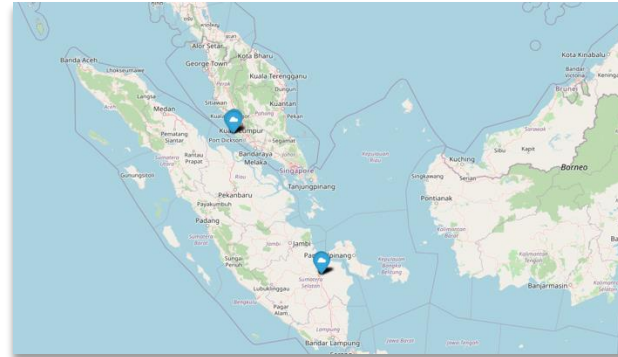
Overview Sample Data Details Permissions History Usage Insights Quality

weatherhistory

The table contains weather and soil data collected over time, associated with specific plants. It includes measurements such as temperature, precipitation, wind speed, and soil moisture and temperature. This data can be used for agricultural analysis, climate impact studies, and understanding plant growth conditions.

Columns

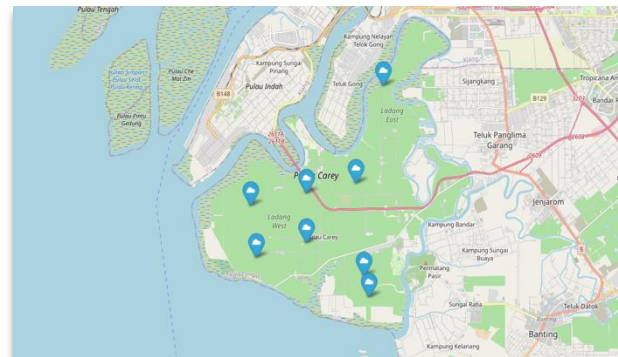
Column	Type	Comment	Tags
date	timestamp		
temperature_2m	float		
precipitation	float		
wind_speed_10m	float		
soil_temperature_0_to_10cm	float		
soil_moisture_0_to_10cm	float		
plantid	string		
lat	string		
longitude	string		



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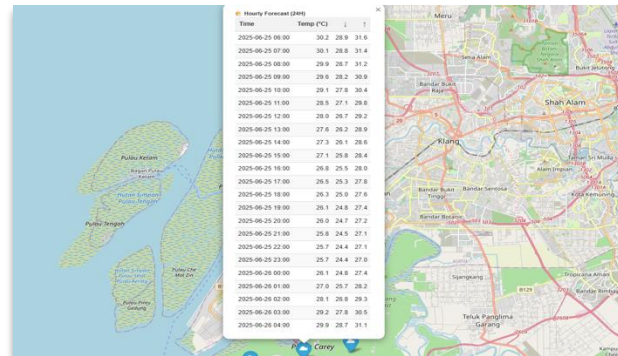
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2025-01-01T01:00:00+08:00	24.629	2.8	2.8	1.0	25.478	0.012	MI007	Uua_7															
2025-01-01T02:00:00+08:00	25.259	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T03:00:00+08:00	24.0999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T04:00:00+08:00	27.026	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T05:00:00+08:00	27.7999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T06:00:00+08:00	27.259	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T07:00:00+08:00	27.8099	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
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2025-01-01T10:00:00+08:00	26.47999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T11:00:00+08:00	26.7999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
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2025-01-01T23:00:00+08:00	26.7999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															



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weatherforecastallunits

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
2025-01-01T00:00:00+08:00	25.478	0.0	0.0	1.0	25.478	0.003	MI007	Uua_7															
2025-01-01T01:00:00+08:00	24.629	2.8	2.8	1.0	25.478	0.012	MI007	Uua_7															
2025-01-01T02:00:00+08:00	25.259	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T03:00:00+08:00	24.0999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T04:00:00+08:00	27.026	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T05:00:00+08:00	27.7999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T06:00:00+08:00	27.259	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T07:00:00+08:00	27.8099	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T08:00:00+08:00	27.779	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T09:00:00+08:00	27.379	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T10:00:00+08:00	26.47999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
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2025-01-01T15:00:00+08:00	27.379	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T16:00:00+08:00	26.47999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T17:00:00+08:00	26.7999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T18:00:00+08:00	27.379	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T19:00:00+08:00	26.47999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T20:00:00+08:00	26.7999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T21:00:00+08:00	27.379	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T22:00:00+08:00	26.47999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															
2025-01-01T23:00:00+08:00	26.7999	0.0	0.0	1.0	25.478	0.001	MI007	Uua_7															



This solution showcases how enterprise data can be transformed into actionable insights through a modern data and AI pipeline. Starting from SAP S/4HANA, operational data flows through SAP Datasphere into Databricks, where it is enriched, analyzed, and used for predictive modeling — including weather forecasts critical to business operations.

End-to-End Integration:

- Source data from SAP S/4HANA (customized information on soil, planting, schedules, and related weather kpi's)
- Transformed and modeled in SAP Datasphere
- Ingested into Databricks for AI/ML processing

AI-Powered Forecasting:

- Machine learning models generate short-term weather forecasts (e.g. next 24 hours)
- Forecasts can be aligned to operational units, plants, or equipment

Interactive Visualizations:

- Maps enhanced with Folium to display geo-based forecast data
- Clickable markers show detailed, localized 24-hour weather predictions
- Enables real-time scenario planning and risk mitigation