Athenium AI Connector
-Retail Analytics-

Retail Analytics - Enterprise

AI is only as useful as the data it has access to. Athenium has now made available their unsurpassed historical weather and severe event data to any AI system using MCP. The datasets selected are designed to support correlations and analysis of the impact of weather conditions, both normal and severe, on the demand for selected products or services, as well as inform site selection and route management. The data can support direct correlations or complete a geographical comparative analysis by including the impact of weather and weather events on local demand. AI tools take the power to correlate and analyze to a whole new level. What is missing is precise, reliable, consistent, localized weather condition data that can be time aligned with sales & delivery data. This Connector provides access to the best available weather and event history data and includes an expert layer which understands the meaning of the meteorological variables and is trained on the type of queries expected for this type of analysis and reporting. This expert layer will continue to get smarter with use.

Athenium Weather & Climate Data Included: *[See attached for details on each of these data sets]*

- **Core Global Weather** - Deep global hourly historical & 7-day hourly forecasts.
- **Enhanced Global Precipitation** – Global high-resolution precipitation.
- **U.S. Severe Event Historical Forensics** – Precise, high-resolution details of extreme events.
- **Global Climate Risk & Trends** – Detailed, localized trending for up to 70 years and In-depth statistics and analytics for hazard, & exposure analysis.

Sample Weather Variables:

Below is a sampling of the types of variables that may be most applicable to retail analytic queries. They are presented here to give the user a sense of the depth and breadth of reporting and analysis possible. The datasets contain well over 200 specific weather variables detailing all aspects of weather and ground conditions. All of these variables are understood by the imbedded expert layer which works with your AI tool, allowing you to ask for what you need in your own words and iterate as you see fit.

- Temperature and specialized temperature variables, such as wind chill temperature, dewpoint temperature, apparent temperature, minimum & maximum instantaneous temperature
- Visibility and cloud cover variables, such as fractional coverage at various heights, visibility & cloud base height

- Wind and humidity variables, such as sustained winds, gusting winds, wind direction, relative humidity, specific humidity & air density
- Precipitation variables including rain, freezing rain, sleet & snow
- Surface composition variables such as soil temperature & moisture at various depths, snow depth, snow melt, and ice cover
- High resolution hourly severe event data for temperature, hail, sustained wind, wind gusts, rainfall, snowfall, and freezing rain
- Localized severe event risk analysis for severe storms, hail, tornados, flooding, wildfires and more.

Additional Trend Variables

- Daily - minimum, maximum, & average for all of the above variables.
- Monthly - all daily variables plus: total wet days, heavy precipitation days, snow & heavy snow days, frost free days, & growing days.
- Annual – all monthly plus: last spring & first autumn frost date, frost free season. days, first spring & last autumn growing date, & growing season days.

Leveraging the Expert Layer:

All of these variables are understood by the imbedded expert layer, allowing users to extract information in their own words and enable smart, AI-driven results and follow-up queries. Further, users may leverage the expert layer to configure case-specific templates of targeted behavior by product or service for use in multiple correlations and define demand areas and other patterns of interest for repeat queries. Further the Expert knows which of our datasets to engage for any analysis, reducing AI searching cycles to a minimum. Why risk missing something by not including consistent, reliable weather intelligence in your decision analytics?