

Spotfire® visual data wrangling

Discovering insights through dynamic interaction

Master your data, visually and code-free

Go beyond basic data preparation; deeply explore and analyze data through interactive transformation.

Spotfire is not just about cleaning data but about discovering insights through dynamic data interaction. We empower engineers and scientists to engage actively with their data, blending, transforming, and augmenting it directly within the analytical process. Visual data wrangling in Spotfire is not a separate preparation step but an integral part of the ad-hoc exploration experience.

In Spotfire, data transformation is driven by analysis. Visualize your data first, then refine and enrich it as insights emerge. Identify outliers, understand patterns, and dynamically adjust your data to deepen your investigation and uncover root causes. With Spotfire, anyone—from analysts and engineers to business leaders—can visually prepare data for analysis with confidence, transparency, and speed.

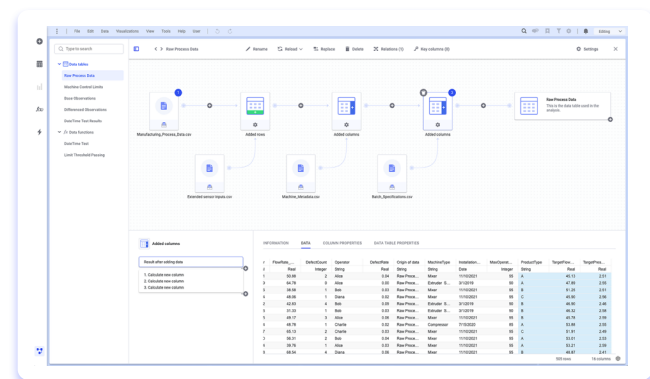


Figure 01: Work directly in the Spotfire Data Canvas to explore, transform, and combine data sources—visually and intuitively.

Key features and capabilities

Interactive and discovery-driven data wrangling

- **Visualization-first workflow:** Begin with visual explorations. Use charts and graphs to identify data issues or areas for deeper analysis.

- **Dynamic transformation:** Wrangle, blend, join, and augment data directly within your analytical workflows.
- **Iterative exploration:** Refine data as you analyze it, responding to new insights and questions in real time.

Data wrangling integrated with analysis

- **Part of the analytical flow:** Data manipulation is not a preliminary step. It is a continuous process integrated with visualization and discovery.
- **Driven by insight:** Realize the need for data transformation through visual patterns and anomalies within your analysis.
- **Contextual data refinement:** Adjust data based on the immediate context of your visualizations and analytical needs.

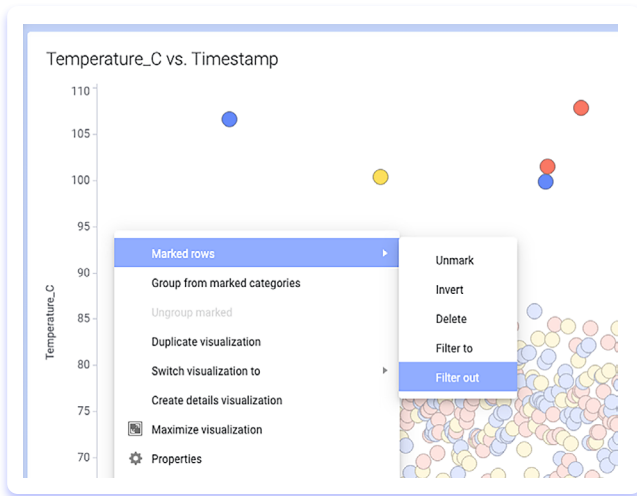


Figure 02: Wrangle your data from your analysis and see the change in real time.

Powerful data wrangling capabilities for deep exploration

- **On-the-fly data blending and joining:** Combine and integrate datasets as you explore, not before.
- **Dynamic data augmentation:** Compute and derive data points to enhance your analysis, understanding, and predictions.
- **Context-aware transformation:** Modify data in response to visual findings, outliers, and unexpected patterns revealed in visualizations.

AI-powered data wrangling guidance

- **AI-driven visualization recommendations:** Get intelligent recommendations for visualizations based

on detected data relationships, helping you get a fast start on understanding your data.

- **Automated data cleansing suggestions:** Receive AI-powered recommendations for data cleansing tasks, such as automatically identifying and fixing inconsistencies with a single click.



Figure 03: Modify your data in response to visual findings directly in your analysis environment and discover outliers and unexpected patterns.

The Spotfire® Data Canvas

- **Visual data flow:** Every data transformation and source is recorded and displayed in the Data Canvas, providing a visual representation of your entire data pipeline.
- **Non-destructive operations:** All data manipulations are non-destructive, allowing you to go back to any previous step, understand the history of changes, and maintain data integrity.
- **Transparent data provenance:** Gain a clear understanding of every step taken to modify and prepare your data, ensuring transparency and auditability.

Engaging subject matter experts across industries

Spotfire® visual data wrangling capabilities are designed for professionals who need to interact with data in-depth. No matter the industry, visual data wrangling can simplify complex data preparation.

- **Energy:** Combine sensor data, drilling logs, and production records to maximize reserves and recovery, execute exploration and field development,

and manage processes.

- **Manufacturing:** Standardize and combine data from module processes and equipment to find root causes and resolve excursions, ensuring designs meet specs and high-quality levels.
- **Life science:** Combine compound structure, characteristics, and assay responses data to develop new medications, optimal dosage, and assess the drug's safety.
- **Logistics:** Clean and merge GPS, inventory, and transport records for real-time visibility.
- **Finance:** Align and transform data from market feeds and internal systems for reporting and risk modeling.

Best practices of visual data wrangling

Step 1: Visualize first

Start with visualizations to gain an initial understanding of your data.

Step 2: Leverage AI recommendations

Use AI-driven suggestions for visualizations and data cleansing to accelerate understanding and efficiency.

Step 3: Discover issues

Use box plots, scatter plots, and histograms to identify outliers or data quality issues.

Step 4: Transform dynamically

Based on observations, blend, transform, and augment data directly within the analytical context.

Step 5: Refine and iterate

Continuously adjust and refine your data as new insights emerge from the visualizations.

Step 6: Deepen analysis

Drill down, explore correlated details, and investigate root causes.

Step 7: Track and manage in the Data Canvas

Use the Data Canvas to visually manage your data flow, ensure non-destructive operations, and maintain data provenance.

Why wrangle data visually with Spotfire?

Spotfire visual data wrangling capabilities accelerate time-to-insight by eliminating the need for scripts, empowering business users and analysts through a fully no-code interface. Its transparent workflows ensure every transformation step is traceable and auditable, while its scalable architecture easily handles everything from small spreadsheets to complex, multi-source data pipelines.

Spotfire visual data wrangling is not about simply transforming data before analysis. It focuses on allowing users to transform data as it is analyzed. Spotfire provides an integrated experience where data interaction fuels deeper exploration and understanding, which is especially crucial for engineers and scientists dealing with complex data.

Unlock the value of your data with Spotfire

Spotfire empowers you to engage deeply with your data, transforming it dynamically as you analyze and explore. Go beyond surface-level reporting and discover the insights hidden within your data through a truly interactive and discovery-driven experience, enhanced by AI assistance and a precise, visual data flow.

Ready to get smarter with Spotfire? Talk to an expert today at spotfire.com/contact-us.



Cloud Software Group
Headquarters
851 W Cypress Creek Rd.
Fort Lauderdale, FL 33309
www.spotfire.com

Spotfire® is a visual data science platform that makes smart people smarter by combining interactive visualizations and advanced analytics to solve complex, industry-specific business problems.

©2025, Cloud Software Group, Inc. All rights reserved. Spotfire, the Spotfire logo, and Spotfire® Data Science are trademarks or registered trademarks of Cloud Software Group, Inc. and/or its subsidiaries in the United States and/or other countries. All other product and company names and marks mentioned in this document are the property of their respective owners and are mentioned for identification.
10 Jun 2025