



# Transform User Guide

*Learn how to use the Transform agent to clean and prepare data before it hits your systems*



# What is Transform?

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Transform is an AI agent within Flatfile that reads your data, suggests actions to resolve validation errors, and performs transformations (called “transforms”) from these recommendations or from user prompts.

## You can use Transform to:

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*Normalize dates, capitalization, and string formatting*

*Fix any values that don't meet validation rules*

*Run simple calculations using existing fields in your data*

*Apply the same fix across many rows without manual editing*

You'll always see a preview before any changes are made, and you can go back to an earlier version of your workbook anytime. You can also save fixes—whether suggested by the agent or prompted by you—to reuse later with similar data.



# What are the capabilities?

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## *Transform text*

- Fix capitalization (e.g., uppercase, lowercase, title case)
- Remove extra spaces and special characters
- Extract parts of text (e.g., first/last name, domain from email)
- Find and replace text
- Standardize formats (e.g., addresses)

## *Transform numbers*

- Convert text to numbers
- Round decimals
- Run basic math operations
- Convert units
- Format currencies

## *Transform dates*

- Convert text to date format
- Standardize date formats
- Extract parts of dates (e.g., year, month, day)
- Calculate date or time differences

## *Clean up your dataset*

- Remove duplicates
- Fix spelling errors
- Standardize variations (e.g., St. to Street)
- Remove invalid characters

## *Use smart logic*

- Update values based on rules ("if X, then Y")
- Combine multiple conditions
- Infer missing data from existing fields



# Common use cases by industry

Here are a few ways that enterprises in various industries can use Transform for more efficient data preparation:

## *Healthcare IT*

Format and standardize clinical data to support compliance, reporting, and integration

- Reformat patient records and EHR exports from systems like Epic or Cerner
- Standardize lab values and clinical codes (e.g., LOINC, ICD-10, NDC) for downstream workflows
- Clean up care quality and trial data to meet regulatory formats like CMS or FDA
- Align population or outcome datasets to match analytics and reporting models

## *Field Services*

Structure service, workforce, and asset data for efficient scheduling, billing, and compliance

- Clean work order and scheduling data for routing and operational systems
- Normalize equipment and maintenance records for asset lifecycle management
- Format certification and compliance data to meet regulatory and audit needs
- Map technician and role data to fit dispatch, access, or performance models

## *Fintech*

Transform financial datasets to meet regulatory, operational, and analytical requirements

- Format KYC and transaction data to meet AML and compliance standards
- Map credit and portfolio files to fit internal schemas and processing models
- Standardize loan, tax, and investment data for reporting and reconciliation
- Clean multi-currency and international fields for consistent financial workflows

## *Ecommerce Marketplaces*

Align seller, catalog, and transaction data to power fulfillment, finance, and support systems

- Standardize seller details like legal entities, tax IDs, and payout information
- Format product listings by aligning categories, attributes, and pricing structures
- Clean order and return data to meet internal SLAs and system requirements
- Prepare fee, commission, and payout records for financial reconciliation and reporting

## *Systems Integrators*

Clean and convert client data for seamless migrations into target platforms and schemas

- Standardize source data from legacy systems, spreadsheets, or exports
- Format customer records, transactions, or configurations to match destination requirements
- Normalize field types, units, and formats for compatibility and validation
- Apply repeatable transforms to support multiple clients with similar migration patterns



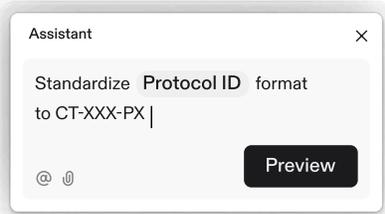
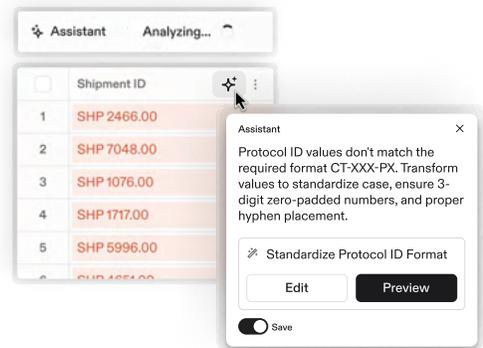
# Where you'll find Transform in Flatfile

Once you've completed the mapping stage, you'll land on your Flatfile workbook. Here you'll see all of the data you imported, with any validation errors in red.

	Delivery Date	Received By	Deviation Flag	Deviation Type	Delay Reason	Reconciliation Flag	Reconciliation Date	Vendor Notes
1	2025-03-25		Yes	Temperature Excursion	Weather	No		Delayed due to customs
2	2025-03-02		No	Other		No		Misrtd to wrong site; reroute p...
3	2025-03-07		Yes	Other	Weather	No		Misrtd to wrong site; reroute p...
4	2025-02-19	N/A	Yes	Other	Customs	No		Label mismatch - corrected at...
5	2025-03-04	N/A	Yes	Late Delivery	Carrier Delay	No		Delayed due to customs
6	2025-03-06		Yes	Other	Other	Yes	2025-03-18	Delayed due to customs
7	2025-03-09	Mark Horton	Yes	Other	Other	No		Delayed due to customs
8	2025-03-14		Yes	Other	Customs	Yes		
9	2025-02-28	barbara hall	Yes	Site Availability	Site Availability	Yes		
10	2025-03-03	Amanda Jacobson	Yes	Late Delivery	Label Error	No		Misrtd to wrong site; reroute p...
11	2025-03-31	N/A	Yes	Temperature Excursion	Site Availability	Yes		
12	2025-03-31	Nathan Summers	Yes	Misrouting	Other	No		Misrtd to wrong site; reroute p...
13	2025-03-28	N/A	Yes	Late Delivery	Other	Yes	2025-04-04	Label mismatch - corrected at...
14	2025-02-24		Yes	Other	Other	No		Label mismatch - corrected at...
15	2025-03-09	jennifer sloan	Yes	Packaging Issue	Other	Yes	2025-03-29	Delayed due to customs
16	2025-04-03		Yes	Late Delivery	Other	No		Label mismatch - corrected at...

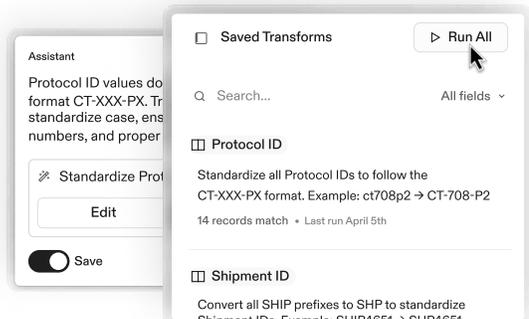
 If you're familiar with the Flatfile feature AI Transform, you're used to clicking into a separate interface to begin prompting. This is no longer necessary with Transform; now you'll be able to view suggested transforms and prompt your own while working within your data sheets.

Click the Analyze button to initiate the agents' audit and suggestions. As the analysis runs, you'll see a sparkle icon appear in the header of any field with a suggested transform. Click on the icon to review, modify, and approve the suggestions.



If you'd like to transform data in a way that is not automatically suggested by the agent, you can do so with Inline Transform by selecting any field.

When applying transforms, you'll see the option to save a transform for later use. Clicking "Saved Transforms" will open a righthand panel and allow you to apply individual saved transforms, or to run them all.





# How to use Transform

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Here's a walkthrough of a typical Transform workflow, beginning with an initial review:

## 1. Review the issues in your dataset

When you're taking a first look at your data in a Flatfile workbook, you'll see a count of invalid records and all cells with errors highlighted in red. You won't need to spend too much time evaluating these errors, as Transform will begin to address them for you in the next step.

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## 2. Put AI to work on resolving errors

The Transform agent is your first step in the data cleanup process. You can begin in one of two ways:

**Analyze & Suggestions:** If it's your first time using Transform to clean up data, start here. Click "Analyze" and watch as AI-powered suggestions appear next to fields with errors. Review the suggestions and click to apply.

**Saved Transforms:** Each time you apply a transform, you'll be given the option to save it to rerun later. Once you have at least one Saved Transform, you can start by applying one or all of them to clean up common issues quickly.

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## 3. Review and address any outstanding errors

In some cases, the Transform Agent will not have enough context or confidence to suggest a fix for every error. After you've applied your Suggestions and run any Saved Transforms, you'll want to review any unresolved errors.

With Transform, you won't need to manually transform the data. You can prompt the agent to do the work for you by selecting a field and typing to clean up common issues quickly.

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## 4. Save the transforms for next time

As you're prompting the agent to complete any final transforms, be sure the toggle to save them for future use is enabled. With each consecutive import, the agent will remember this action and suggest it when you run the analysis, or you'll be able to run it from your Saved Transforms.

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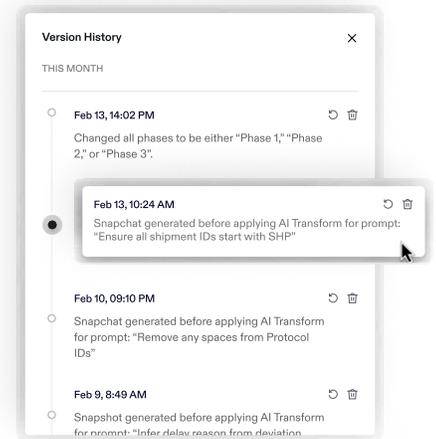


# Version History

As you're applying AI-suggested transforms or prompting them yourself, you can rest easy knowing that you have a safety net if any unintended changes are made.

By clicking the Version History icon in the top-right tool bar, you'll be able to:

- See all changes made during cleanup
- Compare different versions side by side
- Revert to prior versions if desired



# Prompting best practices

When you prompt the agent to perform actions on your data, you'll want to keep the following guidelines in mind:

## 1. Be specific

A vague request like "fix addresses" could be interpreted many different ways. Telling Transform exactly what you want changed removes any guesswork and ensures you get the exact result you want.

✓ Good prompt: "Change 'st.' to 'Street'"

✗ Weak prompt: "Fix addresses" (too vague)

## 2. Name fields exactly

Your data might have multiple similar columns (like "Home Phone" and "Work Phone"). Naming exactly which field you want to modify prevents changes being applied to the wrong column.

✓ Good prompt: "Remove extensions from phone numbers in 'Work Phone'"

✗ Weak prompt: "Remove extensions" (unclear which column)

## 3. Prompt one task at a time

Prompting one transform at a time helps prevent misunderstandings and makes it easier to spot if something goes wrong.

✓ Good prompt: "Make company names uppercase"

✗ Weak prompt: "Make company names uppercase, set dates to MM-DD-YYYY, and remove extensions from 'Work Phone'" (too many tasks at once)

## 4. Give examples

Remove confusion by giving clear examples of what you want from the transform.

✓ Good prompt: "List the full state name wherever there are state acronyms currently. For example, 'NY' should be 'New York'"

✗ Weak prompt: "Type out state names" (unclear goal)



## 5: Define target format

If your formatting requirements are not set in your validation rules, the agent will need instruction as to how to format values.

✓ Good prompt: “Format dates as MM/DD/YYYY”

✗ Weak prompt: “Fix dates” (unclear desired format)

## 6: Include conditions

A powerful capability of Transform is that it can infer missing values from existing data. In order to do this effectively, you should include the conditional logic you want the agent to use.

✓ Good prompt: “Set deal status to ‘closed’ when contract date is known”

✗ Weak prompt: “Update deal status”

## 7: Check data types

When you have a particular data type you want a field to follow, you should specify this in your prompts.

✓ Good prompt: “Convert all values in the price column to currency format”

✗ Weak prompt: “Fix prices” (unclear goal)

# Example prompts

Imagine you have a sheet of customer orders with columns for Order Status, Delivery Date, Customer Email, Phone Number, and Total Amount. There are errors you want to resolve throughout the sheet.

Here are examples of strong prompts you could use with the Transform agent:

- “In the Phone Number column, format all numbers as XXX-XXX-XXXX”
- “Change Order Status to 'Delivered' only when Delivery Date is not empty”
- “In the Total Amount column, convert all prices to currency format”
- “Make Customer Email values all lowercase”
- “Update Order Status to Cancelled where Total Amount is 0 and Delivery Date is empty”

# Limitations to be aware of

When working with Transform, remember that:

- It can't create or delete columns or modify field properties (like making a field required, or changing enum options).
- Changes always apply to entire columns; you can't target specific rows or filtered sets.
- Transform can't modify readonly fields.
- Transform can't bypass validation rules.
- It can't convert between incompatible data types.
- Transform is unable to access data from other workbooks or external sources.
- Transform can't save partial changes; what you see in the preview is what will be applied to your dataset.
- It can't perform actions that require user input during processing.



# Privacy and security

## *Data protection*

All data is encrypted in transit and at rest, with isolated databases for each tenant or data upload to ensure strong logical segregation. We host our infrastructure on Amazon Web Services (AWS), using multiple availability zones for redundancy and uptime. Routine backups are fully encrypted and regularly tested to confirm restoration reliability.

## *AI access*

Flatfile's AI operates entirely within its own infrastructure and does not send customer-uploaded data to third-party AI vendors. We do not use customer data for training external models, and our AI systems do not retain raw customer data for generalized model learning.

## *Access control*

Each guest sees only the data they're allowed to access, based on assigned permissions. Admins can manage user access settings and view a complete audit log of every change made.

## *Data history*

Flatfile automatically keeps a version history of your data, so you can see how it has changed over time. Admins can restore previous versions using saved snapshots, and all edits are recorded in the audit log for full traceability.

# FAQs

## **Which Transform option should I use?**

When you first arrive at a sheet full of validation errors, it can be daunting to know where to begin your cleanup. Starting with the Analyze button and the Suggestions it produces will rapidly reduce the number of errors left to address, and help you build your library of Saved Transforms.

If you know exactly how you'd like to transform your data, you can select any column and prompt the agent inline.

Once you've used Transform, it's likely you'll want to begin future projects by running your Saved Transforms to perform the majority of the cleanup in a single click.

Ultimately, Transform was designed to fit into your data preparation workflow and allow you to choose the most efficient path for you.

## **What if the suggested transform isn't quite right?**

If the data preview for a suggested transform isn't doing what you'd like it to, you can click "Edit" and provide more guidance to the agent.

## **What if I need help?**

You can find more resources for using Transform in our [Knowledge Base](#). If you're still stuck or have questions, reach out to our team at [support@flatfile.com](mailto:support@flatfile.com).