



Directory

IN/OUT

returns all the files in a specified directory. Along with file names, other pertinent information about each file is returned, including file size, creation date, last modified, and much more.

Date Time Now

IN/OUT

returns a single record: the Date and Time at the workflow runtime, and convert the value into the string format of the user's choosing.

Browse

IN/OUT

displays data from a connected tool as well as data profile information, maps, reporting snippets, and behavior analysis information in the data.

Output Data

IN/OUT

writes the results of a workflow to a file or database.

Map Input

IN/OUT

makes it possible to draw or select map objects (points, lines, and polygons) to be stored in the workflow.

Input Data

IN/OUT

brings data in to your workflow by connecting to a file or database.

XDF Output

IN/OUT

writes an Alteryx data stream to an XDF (.xdf) file, which is the format used by Microsoft R ScaleR functions to scale predictive analytics to millions of records.

XDF Input

IN/OUT

reads data from an XDF (.xdf) file, which is the format used by Microsoft R ScaleR functions to scale predictive analytics to millions of records for either using the .xdf file as input to a predictive analytics tool or reading the file into an Alteryx data stream for further data cleansing or blending.

Text Input

IN/OUT

makes it possible to manually type text to create small data files for input, which can be useful for creating Lookup tables.

Data Cleansing

PREPARATION

fixes common data quality issues using a variety of parameters.

Create Samples

PREPARATION

splits the input records into two or three random samples. Specify the percentage of records that are in the estimation and validation samples, and if the total is less than 100%, the remaining records fall in the holdout sample.

Auto Field

PREPARATION

reads through an input file and sets the field type to the smallest possible size relative to the data contained within the column.

Generate Rows

PREPARATION

creates new rows of data at the record level. It is useful to create a sequence of numbers, transactions, or dates.

Formula

PREPARATION

creates or updates columns using one or more expressions to perform a broad variety of calculations or operations.

Filter

PREPARATION

queries records and splits the data into two outputs, True (where the data meets the specified criteria) and False (where it does not).

Multi-Field Formula

PREPARATION

makes it easy to execute a single function on multiple fields.

Multi-Field Binning

PREPARATION

groups multiple numeric fields into tiles or bins, especially for use in predictive analysis.

Imputation

PREPARATION

updates specific values in a numeric data field with another selected value. It is useful for replacing NULL values.



Random % Sample

PREPARATION

returns an expected number of records resulting in a random sample of the incoming data stream.

Oversample Field

PREPARATION

samples incoming data so that there is equal representation of data values so they can be used effectively in a predictive model.

Multi-Row Formula

PREPARATION

creates or updates a column using an expression that can reference columns in a subsequent or prior row. It is useful for parsing complex data, and creating running totals, averages, percentages, and other mathematical calculations.

Select

PREPARATION

includes, excludes, and reorders the columns of data that pass through a workflow. With the Select tool you can also modify the type and size of data, rename a column, or add a description.

Sample

PREPARATION

extracts a specified portion of the records in the data stream.

Record ID

PREPARATION

creates a new column in the data and assigns a unique identifier, that increases sequentially, for each record in the data.

Tile

PREPARATION

assigns a value (tile) based on ranges in the data.

Sort

PREPARATION

arranges the records in a table in alphanumeric order, based on the values of the specified data fields.

Select Records

PREPARATION

selects specific records and/or ranges of records including discontinuous ranges. It is useful for troubleshooting and sampling

Find Replace

JOIN

searches for data in one field from the input table and replaces it with a specified field from a different data table.

Append Fields

JOIN

appends the fields of one small input (Source) to every record of another larger input (Target). The result is a Cartesian Join where all records from both inputs are compared.

Unique

PREPARATION

distinguishes whether a data record is unique or a duplicate by grouping on one or more specified fields, then sorting on those fields. The first record in each group is sent to the Unique output stream while the remaining records are sent to the Duplicate output stream.

Join Multiple

JOIN

combines two or more inputs based on a commonality between the input tables. Only the joined records are outputted through the tool, resulting in a wide (columned) file.

Join

JOIN

combines two inputs based on a commonality between the two tables. It functions like a SQL join but gives the option of creating three outputs resulting from the join.

Fuzzy Match

JOIN

identifies non-identical duplicates of a database by specifying parameters to match on. Values need not be exact to find a match, they just need to fall within the user specified or prefabricated parameters set forth in the configuration properties.

Arrange

TRANSFORM

manually transposes and rearranges your data fields for presentation purposes. Data is transformed so that each record is turned into multiple records and columns can be created by using field description data.

Union

JOIN

appends multiple data streams into one unified stream. The tool accepts multiple inputs based on either field name or record position, creating a stacked output table. The user then has complete control to how these fields stack or match up.

Make Group

JOIN

takes data relationships and assembles the data into groups based on those relationships.



Running Total

TRANSFORM

calculates a cumulative sum, per record, in a file.

Crosstab

TRANSFORM

pivots the orientation of the data table and transforms the data so vertical data fields can be viewed on a horizontal axis, summarizing data where specified.

Count Records

TRANSFORM

returns a count of how many records are going through the tool.

Weighted Average

TRANSFORM

calculates the weighted average of an incoming data field. A weighted average is similar to a common average, but instead of all records contributing equally to the average, the concept of weight means some records contribute more than others.

Transpose

TRANSFORM

pivots the orientation of the data table and transforms the data so you can view horizontal data fields on a vertical axis.

Summarize

TRANSFORM

can conduct a host of summary processes, including: grouping, summing, count, spatial object processing, string concatenation, and much more.

Interactive Chart

REPORTING

creates interactive bar charts, line graphs, scatter plots, and pie charts for visualizing data in your workflow.

Insight

REPORTING

lets you create and arrange multiple charts and text elements on a dashboard, create filters for viewing specific data, and create drilldowns to view different levels of data.

Image

REPORTING

adds graphics to reports.

Map Legend Splitter

REPORTING

takes a legend from the Report Map Tool and splits it into its component parts.

Map Legend Builder

REPORTING

takes the components output from the Map Legend Splitter Tool and builds them back into a legend table.

Layout

REPORTING

arranges two or more reporting snippets to output as a report using the Render tool.

Report Footer

REPORTING

adds a footer to a report.

Render

REPORTING

transforms report snippets into reports in .pdf, .html, .xlsx, .docx, .rtf and .pxml formats.

Overlay

REPORTING

arranges reporting snippets on top of one another for output using the Render tool.

Report Text

REPORTING

adds text to reports and documents.

Report Map

REPORTING

creates a map image from a workflow.

Report Header

REPORTING

adds a header to a report.



Comment

DOCUMENTATION

adds annotation to the workflow to capture notes or explain processes for reference later.

Table

REPORTING

creates basic data tables and pivot tables from input data.

Email

REPORTING

uses a data stream to send emails for each record.

Association Analysis

DATA INVESTIGATION

determines which fields in a database have a bivariate association with one another.

Tool Container

DOCUMENTATION

organizes tools in a workflow into a box, which can be collapsed or disabled.

Explorer Box

DOCUMENTATION

displays a web page, file directory, or file on the canvas.

Field Summary

DATA INVESTIGATION

analyzes data and creates a summary report containing descriptive statistics of data in selected columns. Use the Field Summary Tool to gain insight into data and receive recommendations for managing data.

Distribution Analysis

DATA INVESTIGATION

fits one or more distributions to the input data and compares them based on a number of Goodness-of-Fit* statistics.

Contingency Table

DATA INVESTIGATION

creates a contingency table based on selected fields, to list all combinations of the field values with frequency and percent columns.

Histogram

DATA INVESTIGATION

provides a histogram plot for a numeric field by showing the frequencies of records falling in a set of continuous value ranges. It also provides a smoothed empirical density plot. Frequencies are displayed when a density plot is not selected, and probabilities when this option is selected.

Heat Plot

DATA INVESTIGATION

uses a heat plot color map to show the joint distribution of two variables that are either continuous numeric variables or ordered categories.

Frequency Table

DATA INVESTIGATION

produces a frequency analysis for selected fields. The output includes a summary of the selected fields with frequency counts and percentages for each value in a field.

Plot of Means

DATA INVESTIGATION

takes a numeric or binary categorical field (with the binary categorical field converted into a set of zero and one values) as a response field along with a categorical field and plots the mean of the response field for each of the categories (levels) of the categorical field.

Pearson Correlation

DATA INVESTIGATION

measures the linear dependence between two variables as well as the covariance.

Importance Weights

DATA INVESTIGATION

provides methods for selecting a set of variables to use in a predictive model based on how strongly related each possible predictor is to the target variable.

Violin Plot

DATA INVESTIGATION

displays the distribution of a single numeric variable, and conveys the density of the distribution.

Spearman Correlation

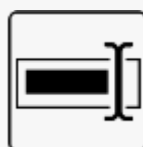
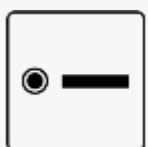
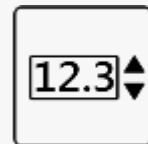
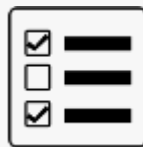
DATA INVESTIGATION

assesses how well an arbitrary monotonic function could describe the relationship between two variables, without making any other assumptions about the particular nature of the relationship between the variables.

Scatterplot

DATA INVESTIGATION

makes enhanced scatterplots, with options to include boxplots in the margins, a linear regression line, a smooth curve via non-parametric regression, a smoothed conditional spread, outlier identification, and a regression line.



Check Box

INTERFACE

displays a check box option in an app.

Action

INTERFACE

updates the values of development tools with the values from the interface questions at runtime.

Basic Data Profile

DATA INVESTIGATION

outputs basic metadata such as data type, min, max, average, number of missing values, etc.

Date

INTERFACE

displays a calendar in app.

Control Parameter

INTERFACE

configures a control parameter input for each iteration of a batch macro.

Condition

INTERFACE

tests for the presence of user selections and returns either a true or false result

File Browse

INTERFACE

displays a file browse control in an app to read an input or write an output.

Error Message

INTERFACE

displays an error message for an app or macro based on criteria in an expression.

Drop Down

INTERFACE

displays a single selection list in an app.

Macro Input

INTERFACE

creates an input connection on a macro.

List Box

INTERFACE

displays a multi-selection check box list in an app.

Folder Browse

INTERFACE

displays a folder browse control in an app.
This Interface tool is not supported for running apps in the Alteryx Analytics Gallery

Numeric Up Down

INTERFACE

displays a numeric control in an app.

Map

INTERFACE

displays an interactive map for the user to draw or select map objects in an app.

Macro Output

INTERFACE

creates an output connection on a macro.

Tree

INTERFACE

displays an organized, hierarchal data structure in an app.

Text

INTERFACE

displays a free form textbox in an app.

Radio Button

INTERFACE

displays a mutually exclusive option in an app.



Blob Convert

DEVELOPER

takes different data types and either convert them to a Binary Large Object (Blob) or takes a Blob and converts it to a different data type.

Base64 Encoder

DEVELOPER

issues a base 64 encode string for a specified string field.

API Output

DEVELOPER

displays the contents of a data stream in the Results window as a comma-delimited, quote-qualified string.

Block Until Done

DEVELOPER

stops downstream processing until all records come through. This tool makes it possible to overwrite an input file.

Blob Output

DEVELOPER

writes out each record into its own file.

Blob Input

DEVELOPER

reads a Binary Large Object such as an image or media file, by browsing directly to a file or passing a list of files to read.

Download

DEVELOPER

retrieves data from a specified URL to be used in downstream processing or to be saved to a file.

Detour End

DEVELOPER

unifies the data processes from an upstream Detour tool into a single stream for further analysis in analytic apps and macro.

Detour

DEVELOPER

bypasses a process in a macro or analytic app.

Dynamic Replace

DEVELOPER

replaces data values on a series of fields, based on a condition.

Dynamic Rename

DEVELOPER

renames any or all fields within an input stream by employing the use of different methods. Additionally, dynamic or unknown fields can be renamed at runtime.

Dynamic Input

DEVELOPER

reads from an input database at runtime and dynamically chooses what records to read in.

JSON Parse

DEVELOPER

separates Java Script Object Notation text into a table schema for the purpose of downstream processing.

Field Info

DEVELOPER

displays in tabular form, the name of fields within a data stream as well as the field order, field type and field size.

Dynamic Select

DEVELOPER

allows fields to be selected either by field type or via a formula. Additionally dynamic or unknown fields will also be selected by field type or via formula at runtime.

Run Command

DEVELOPER

allows the user to run external command programs within Alteryx. This tool can be used as an Input, Output or as a pass through, intermediary tool.

R

DEVELOPER

is a code editor for users of R, an open-source code base used for statistical and predictive analysis.

Message

DEVELOPER

reports messages about the process to the Results window.



Test

DEVELOPER

verifies data or processes in a workflow.
Since the Test tool accepts multiple inputs, with a single Test tool you can create multiple tests and test multiple sets of data and processes.

Apache Spark Code

DEVELOPER

allows the user to connect directly to an Apache Spark cluster instance and run commands directly from Alteryx.

Python

DEVELOPER

is a code editor for users of Python.

Macro Output In-DB

IN-DB

creates an in-database output connection on a macro.

Macro Input In-DB

IN-DB

creates an in-database input connection on a macro and populates it with placeholder values.

Throttle

DEVELOPER

slows down the speed of the downstream tool by limiting the number of records that are passed through.

Data Stream In

IN-DB

brings data from a standard workflow into an in-database workflow.

Connect In-DB

IN-DB

establishes a new or existing in-database connection in a workflow.

Browse In-DB

IN-DB

lets you view your data at any point in an in-database workflow. Each Browse In-DB triggers a database query and can impact performance.

Dynamic Output In-DB

IN-DB

outputs information about the in-database workflow to a standard workflow for predictive in-database processing.

Dynamic Input In-DB

IN-DB

takes In-DB Connection Name and Query fields from a standard data stream and inputs them into an in-database data stream.

Data Stream Out

IN-DB

streams data from an in-database workflow to a standard workflow, with an option to sort the records.

Join In-DB

IN-DB

combines two in-database data streams based on common fields by performing an inner or outer join.

Formula In-DB

IN-DB

creates or updates fields in an in-database data stream with an expression using the database's native language (e.g., SQL).

Filter In-DB

IN-DB

filters in-database records with a basic filter or with a custom expression using the database's native language (e.g., SQL).

Union In-DB

IN-DB

combines two or more in-database data streams with similar structures based on field names or positions. In the output, each column will contain the data from each input.

Summarize In-DB

IN-DB

summarizes in-database data by grouping, summing, counting, counting distinct fields, and more. The output contains only the result of the calculations.

Select In-DB

IN-DB

selects, deselects, reorders, and renames fields in an in-database workflow.



Write Data In-DB

IN-DB

uses an in-database data stream to create or update a table directly in the database.

Sample In-DB

IN-DB

limits the in-database data stream to a number or percentage of records.