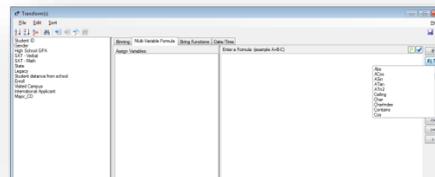# Interpreting Excel Functions in Veera

This is a quick guide for those of you who are proficient with your Excel functions but are unsure how those skills are going to translate to data manipulation in Veera. Rest assured, your skills will not go to waste; Veera has many functions that are easily interpretable and directly related to Excel functions. We have put together a list of commonly used Excel functions and their corresponding Veera functions. We tried to cover the most commonly used functions, but if you don't see your favorite function on this list, there are a number of places to look:

- The functions list in the 'Transform Node' in Veera is always a good place to start.   Also, remember to explore all of the separate tabs within the 'Transform Node' as there are a couple of tabs less frequented that contain some very useful functions. The Date/Time tab of the 'Transform Node' contains just about any transformation to a Date/Time variable that you could think of.

- There are a number of other nodes in Veera that do the calculation functions that are commonly used in Excel. The 'Aggregate Node' and the 'Median of Column Data Node' should contain most of your calculation needs.

- Worth noting on its own is the fact that Excel uses double quotes (") while Veera uses single quotes ('). For instance, an Excel function might look something like, IF(Variable = "Puppy", "Dog", "Cat") while in Veera it would be IF(Variable = 'Puppy', 'Dog', 'Cat').

- As with Excel, there are always a number of ways to get to the same result in Veera. Here are a few more places you might find some useful functions that you did not know were there:

  - <u>Filter Node</u> – Contains a number of different ways to filter the data such as <, >, etc. What you may not have known existed is the 'expression' option for dates.   This gives you a number of different options for filtering for specific time periods, quarters, etc.
  - <u>Cleanse Node</u> – While the more commonly used function of the cleanse node is the 'Replace Operation' tool, there is also a 'Round Operation' that allows you to round values anyway that you would like.
  - <u>Convert Node</u> – Allows you to change the data type of any variable in your data set. With this you can also change the format so that it will round for you, or make a real value into a percent.

Most of the functions that are referenced in the Transform Node can be found in the functions list here

Excel Function	Description		Node/Veera Function	Description
AVERAGE	Calculates the mean of a group of values		Aggregate Node (Mean)	Calculates the mean of any and all numerical variables
CONCATENATE	Assembles two or more text strings into one		Transform Node Multi Variable formula	Add text variables together, ie: A+B, to concatenate
COUNTA	Adds up the cells in a selected range that are not empty		Aggregate Node (Count)	Counts the number of data entries for the chosen variable
COUNT	Counts the number of cells in a range that contains numbers		Aggregate Node (Count/Count Distinct)	'Count' counts the number of data entries for the chosen variable, while 'Count Distinct' counts the number of unique entries
COUNT-BLANK	Counts the number of blank cells in a selected range		Filter Node and Aggregate Node	Filter for the blank values and aggregate by count
DATEDIF	Calculates the number of days between two dates		Transform Node function (Days Between)	Calculates the number of days between two dates
IF	Tests for a true or false condition and then returns one value or another		Transform Node (IF)	Tests for a true or false condition and then returns one value or another
INT	Removes the decimal portion of a number, leaving just the integer portion		Convert Data Type Node (Integer)	Removes the decimal portion of a number, leaving just the integer portion
LEFT/RIGHT	Extracts one or more characters from the left or right side of a text string		Transform Node function (Left/Right)	Returns the left/right part of a string the specified number of characters

Excel Function	Description		Node/Veera Function	Description
LEN	Returns a text string's length		Transform Node function (Len)	Returns the # of characters of a string
MEDIAN	Returns the middle number in a data set		Median Node	Returns the middle number in a data set
NETWORKDAYS	Counts the number of working days between two dates		Transform Node function (Workdays Between)	Counts the number of working days between two dates
NOW	Returns the system date and time		Transform Node function (NOW())	Returns the system date and time
QUARTILE	Returns the quartile of a data set		Quantile Node	Offers the option of quartile, decile, etc.
RADIANS	Converts degrees to radians		Transform Node function (Radian)	Converts degrees to radians
RAND	Returns a random number between 0 and 1		Transform Node function (Random)	Returns a random number between 0 and 1
RANK	Returns the rank of a number in a list of numbers		Rank Node	Ranks any given variable
ROUND	Rounds a number to a specified number of decimal places or digit positions		Convert Data Type Node (Integer or Text)	The integer option within the convert node will automatically round for you. The text option will give you decimal options.
ROUNDUP/ ROUNDDOWN	Rounds a number up or down		Cleanse Node Round Operation Tab	This gives you the option to round the variable anyway you would like

Excel Function	Description		Node/Veera Function	Description
SUM	Calculates the sum of a group of values		**Aggregate Node (Sum)**	Calculates the sum of any and all numerical variables
SUMIF	Calculates a sum from a group of values, but just of values that are included because a condition is met		**Filter Node and Aggregate Node**	You can use the filter node to select the desired outcome and then sum the corresponding variables through the aggregate node
TODAY	Returns the system date, without the time		**Transform Node function (TODAY())**	Returns the system date, without the time
TRANSPOSE	Copies data located in a row into a column or copies data located in a column into a row		**Transpose Node**	Copies data located in a column into a row
UPPER/LOWER	Changes the contents of a cell to appear in upper/lower case		**Convert Node (Text)**	The data type text gives you the option of UPPER CASE or lower case
VLOOKUP	Finds specific information that has been stored in a spreadsheet		**Lookup Node**	Finds specific information that has been stored in a spreadsheet

OPERATIONAL TRANSLATIONS

Operations in Formulas in Excel	
:	Colon
	Single Space
,	Comma
-	Negation (as in -1)
%	Percent
^	Exponentiation
*	Multiplication
/	Division
+	Addition
-	Subtraction
&	Connects two strings of text
=	Comparison (Equal to)
<	Less than
>	Greater than
>=	Greater than or Equal to
<=	Less Than or Equal to
<>	Not equal to
" "	Denotes Text

Operations in Formulas in Veera	
:	Colon
	Single Space
,	Comma
-	Negation (as in -1)
0.xxxx	For %'s use decimal representation
**	Exponentiation
*	Multiplication
/	Division
+	Addition
-	Subtraction
+	Connects two strings of text
=	Comparison (Equal to)
<	Less than
>	Greater than
>=	Greater than or Equal to
<=	Less Than or Equal to
<>	Not equal to
' '	Denotes Text