



SCIPRO HAWK™1

ENGINEERING AND SCIENTIFIC DATA MINING
SOFTWARE DEMONSTRATION & INSTALLATION
GUIDE

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Patent 2018 SciPro Hawk™1 Software



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INTRODUCTION

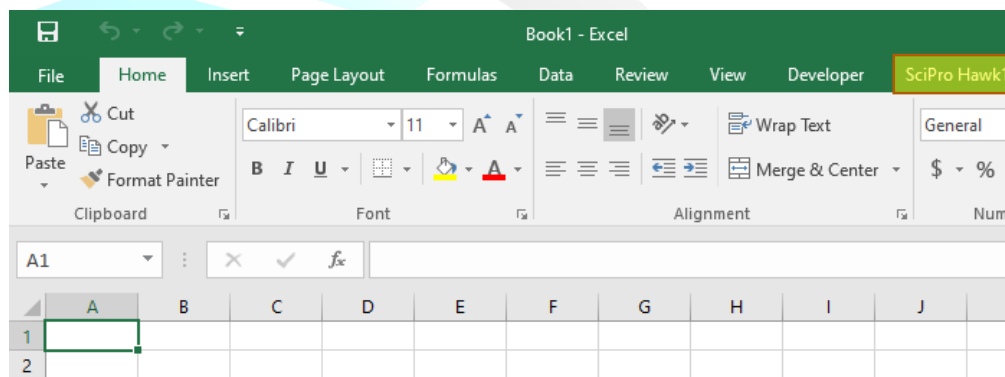
The engineering and scientific data mining, tabulation, analysis, and graphing software is a product of DSL Data Mining Co. The software has been developed as an add-in for Excel to fulfill a requirement for engineers and scientists to export data from several different formats into one format (Excel) and then to help the user to manipulate the data. The software can import, tabulate, analyze, and graph data. The purpose of this Demonstration Guide is to illustrate examples of the software functionality. The software is licensed in five versions: 14-Day Trial, Basic, BasicPlus, Max, and Universe. A breakdown of the capabilities associated with each version of the software is shown in the proceeding table.

Software Features	SciPro Hawk1 Licensing Types				
	14-Day Trial	Basic	BasicPlus	Max	Universe
Data Import Features					
Require To Close Excel GUI	X	X	X	X	X
Load Directory/Files	X	X	X	X	X
Delimit Import Data Options	X	X	X	X	X
Clear Directory	X	X	X	X	X
Import File CSV, Text, And Excel	X	X	X	X	X
Types: Log, RTF, And JSON	X			X	X
Reset Import Options	X	X	X	X	X
General Command Options					
Perform Tabulation	X	X	X	X	X
Perform Analysis	X	X	X	X	X
Perform Tabulation/Analysis	X			X	X
Save And Load Configuration Settings	X		X	X	X
Number Of Concurrent Tabulations Possible	3	1	2	3	4
Data Search / Tabulation Features					
Index By Whole Or Decimal Numbers With Accuracy Settings	X	X	X	X	X
Time Indexing With Unit Options	X			X	X
First Row As Header Option	X	X	X	X	X
Word Search Accuracy And Location Options	X	X	X	X	X
Row Start , Repeat, And Maximum Limit Options	X	X	X	X	X
Selectable Row Range (Slice) Options	X	X	X	X	X
Selectable Column Range Options	X	X	X	X	X
Tabulation Placement	X	X	X	X	X
Tabulation Column Inversion Option	X	X	X	X	X
Graph / Analysis Features					
Graph/Analysis Placement	X	X	X	X	X
Selectable Row Start	X	X	X	X	X
Selectable Number Of Rows	X	X	X	X	X
Linear Graph, Maximum Number Of Plots	6	1	3	6	6
Scatter Graph, Maximum Number Of Plots	6	1	3	6	6
Histogram, With Bin And Culmulative Percentage Options	X	X	X	X	X
Bar Graph, Maximum Number Of Bars	6	1	3	6	6
Column Graph, Maximum Number Of Columns	6	1	3	6	6
Pie Chart	X	X	X	X	X
Adjustable Moving Average Graph, Maximum Number Of Plots	2		1	2	3
Statistic Options: Mean, Mode, Minimum, Maximum, Standard Deviation, Uncertainty, And Median	X	X	X	X	X
Show Statistics Equations	X	X	X	X	X

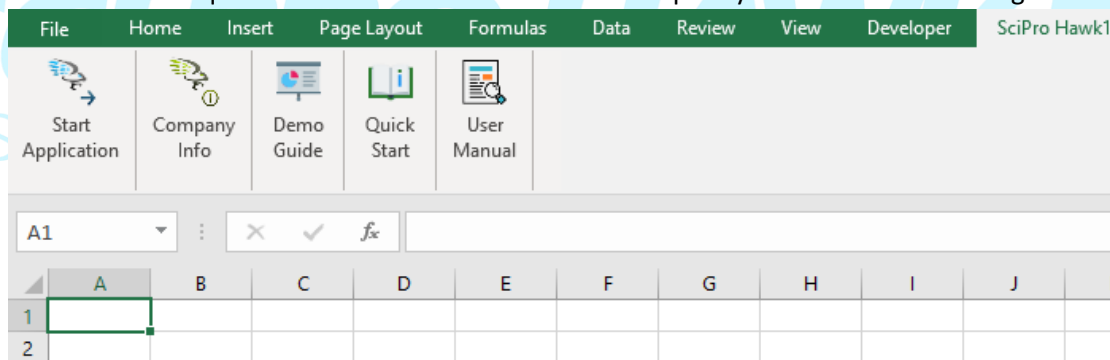
SOFTWARE INSTALLATION

Step by Step SciPro Hawk1 Installation Procedure:

1. Download the application from source location (i.e. your email cloud drive or web site) to your download folder in windows explore.
2. Within Windows Explorer create a new folder called 'Your name folder' on the root of the C:\
3. Navigate to the downloads folder and select (highlight) the SciPro applications and move or copy to the C:\" your name" folder.
Ctrl-A to select all, Ctrl-C to copy, Ctrl-V to paste.
4. In the SciPro folder double click on the file to install the app. Once the installation starts you will be prompted to select the location. You can use the default location or change to a different location.
5. After the installation is completed, there will be a new "SciPro Hawk1 Edition" Tab available in your MS Excel application.



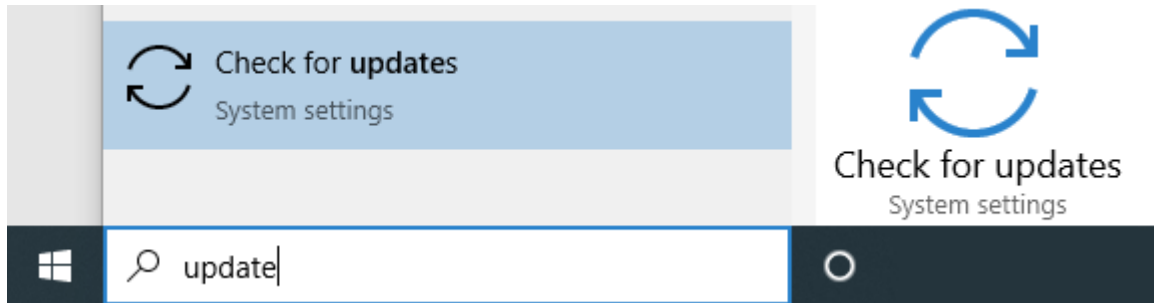
6. There will be an activation process to start using software. Please see the SciPro Hawk™1 Purchase Activation Guide. Upon activation, you can click on the new "SciPro Hawk1 Edition" Tab (mentioned above) and see the SciPro Hawk™1 command ribbon as shown below. The ribbon contains quick launch icons to allow the user to quickly access the data mining software.



SOFTWARE REQUIREMENTS

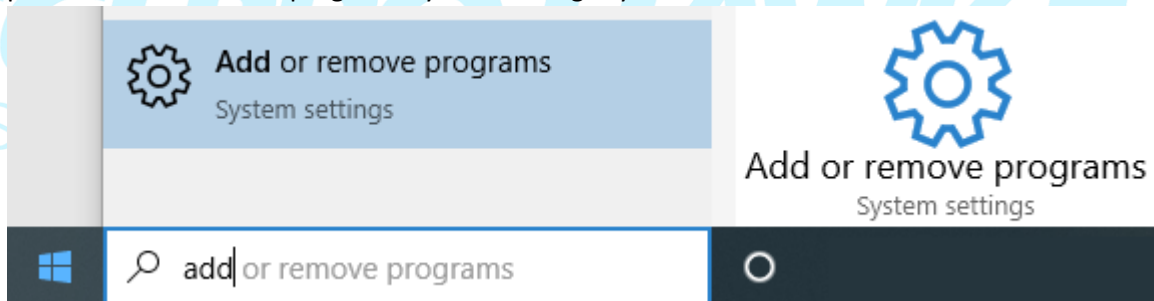
it is important to **not** overlook two important points that could be unintentionally overlooked at the end of the installation process.

- 1) SciPro Hawk™1 uses Microsoft .NET Framework 4.5 or higher components that are typically included within your Microsoft operating system software. Please use Windows Update to check for any critical updates. Click the Windows icon at the bottom left of your desktop, type “update” so that you can get to Check for updates System settings, and then select that choice.

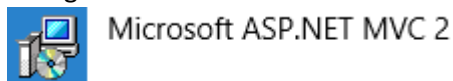


Ideally, you will find that your system is up to date. If not, please “Check for updates” and follow system prompts to update your system software.

If you wish, you could also check your installed software to verify that you have Microsoft ASP .NET or .NET Framework. To do so, click the Windows icon at the bottom left of your desktop, type “add” (but do not hit the enter key), then select Add or remove programs System settings. You might need to backspace, and then type add again in case AI does not initially provide Add or remove programs System settings by default.

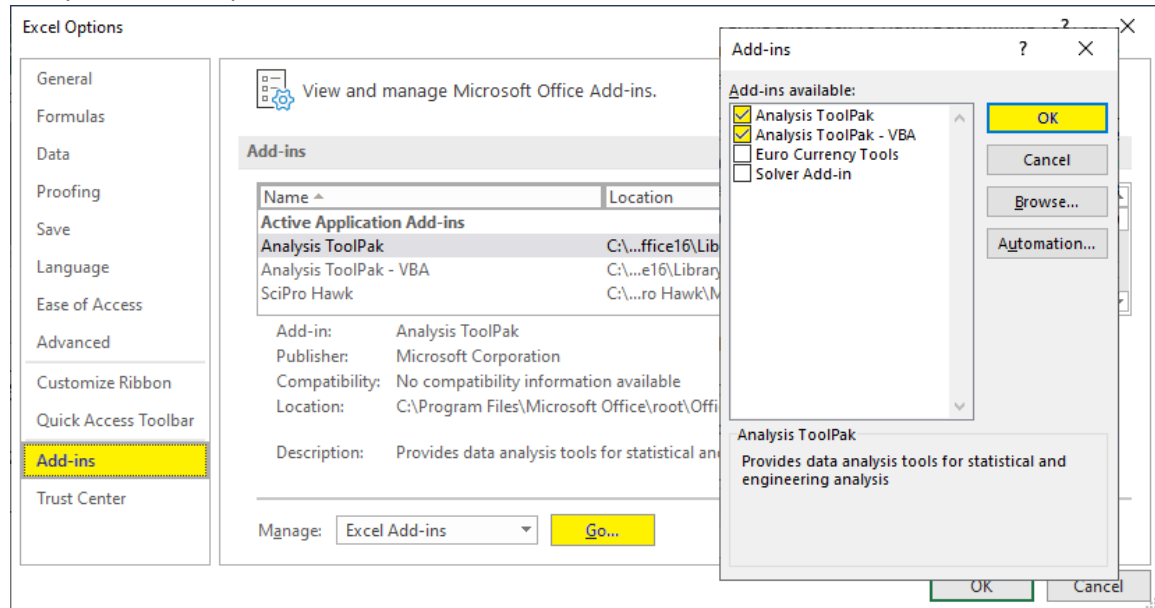


After the list of installed software on your computer populates, you should be able to find a listing for Microsoft ASP .NET or .NET Framework. Example:



This means you will have the .NET Framework components available that SciPro Hawk™1 uses. If you do not see something like ASP .NET or .NET Framework, please see your hardware retailer for assistance.

- 2) Please verify Excel Analysis ToolPak is installed using Excel's File - Options - Add-Ins. To do so, within Excel, go to the File tab, select Option, and within the Excel Options screen verify the Analysis ToolPak options are enabled as shown.

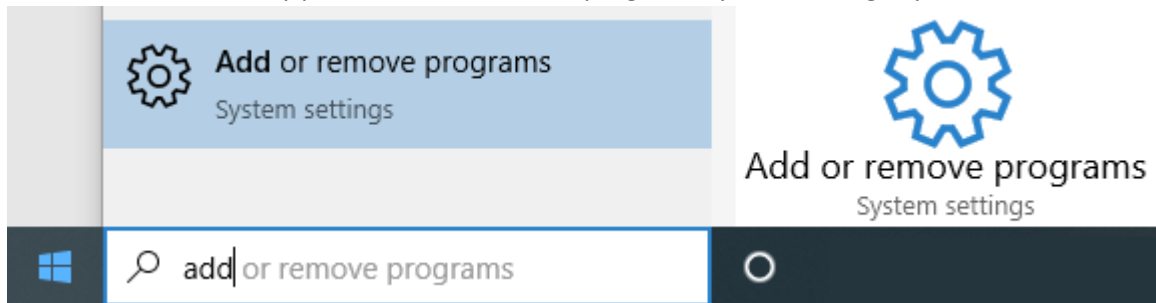


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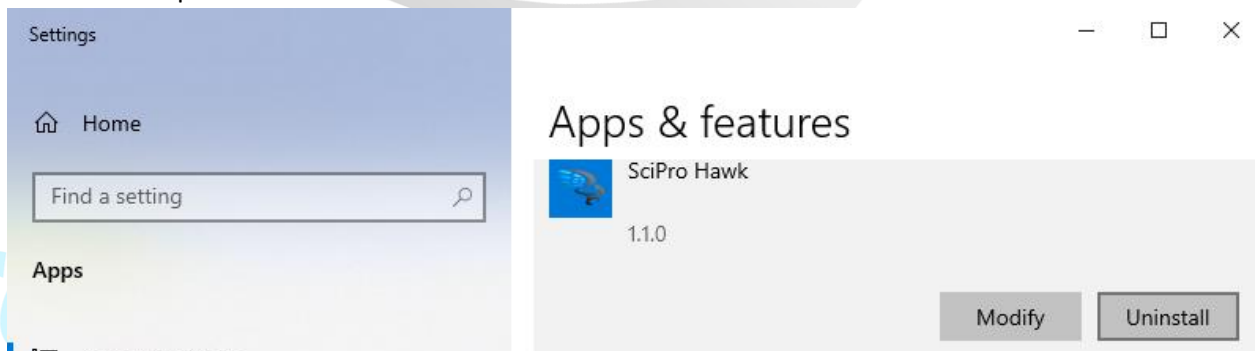
SOFTWARE UPDATE OR UPGRADE INSTALLATION

To install an updated or upgraded version of the software:

1. First uninstall the current version of the software you have. To do so, click the Windows icon at the bottom left of your desktop, type “add” (but do not hit the enter key), then select Add or remove programs System settings. You might need to backspace, and then type add again in case AI does not initially provide Add or remove programs System settings by default.



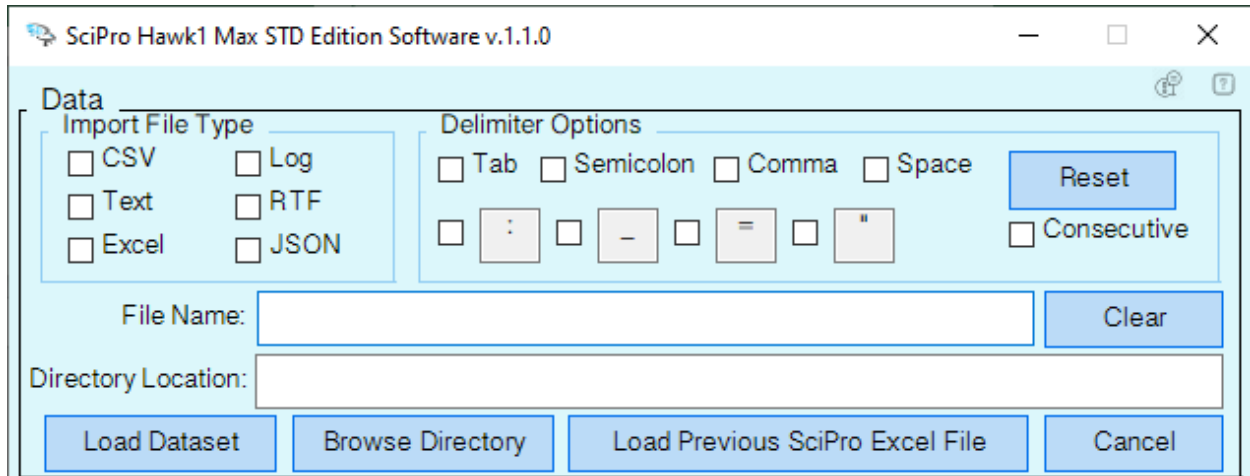
2. After the list of installed software on your computer populates, you should be able to find your current SciPro Hawk software in the list. Select that, then select the Uninstall button. Windows will prompt “This app and its related info will be uninstalled” at which point you can select Uninstall again to complete the process. Note, you may need to watch to make sure any firewall or anti-virus software you have will allow the update to your computer to complete the uninstallation process.



3. Once uninstalled, proceed to install a more current version of the software as directed in the [Software Installation](#) section above.

LOAD DATASET

SciPro Hawk™1 helps you import data from up to six different types of files, dependent upon which edition of the software you purchase. Examples include CSV, Text, Excel, Log, RTF, and JSON. The software offers many options for filtering the data for import. See partial screen shot below of software Graphical User Interface (GUI) related to Data import functionality.



Example of data, before and after loading into Excel using SciPro Hawk™1 import data functionality:

Date, Amount, Check No., Description

2/1/2019,1900,,Transfer Deposit

2/1/2019,-1500,211,Rent

2/3/2019,-100,210,Groceries

2/4/2019,1800,,Deposit

2/8/2019,-320,212,Transfer Withdrawal

2/11/2019,-600,213,Auto Repair

2/13/2019,-300,214,Power

3/1/2019,1800,,Deposit

3/1/2019,-1500,215,Rent

3/4/2019,-300,216,Groceries

3/13/2019,-220,218,Power

4/1/2019,1900,,Transfer Deposit

4/1/2019,-1500,219,Rent

4/2/2019,-100,220,Groceries

4/13/2019,-180,223,Power

	A	B	C	D
1	Date	Amount	Check No.	Description
2	2/1/2019	1900		Transfer Deposit
3	2/1/2019	-1500	211	Rent
4	2/3/2019	-100	210	Groceries
5	2/4/2019	1800		Deposit
6	2/8/2019	-320	212	Transfer Withdrawal
7	2/11/2019	-600	213	Auto Repair
8	2/13/2019	-300	214	Power
9	3/1/2019	1800		Deposit
10	3/1/2019	-1500	215	Rent
11	3/4/2019	-300	216	Groceries
12	3/13/2019	-220	218	Power
13	4/1/2019	1900		Transfer Deposit
14	4/1/2019	-1500	219	Rent
15	4/2/2019	-100	220	Groceries
16	4/13/2019	-180	223	Power

DATA SEARCH/TABULATION

SciPro Hawk™1 helps you search through and sort the data to help organize it with the following features:

1. Index (number) by whole or decimal numbers with accuracy settings.
2. Time indexing with unit options.
3. Several search filter, header, and accuracy settings.
4. Row and Column settings including start, repeat, end, and range options.
5. Column inversion capabilities.

Typical examples include:

Example 1. Filtering to find specific rows with a specific keyword search:

	A	B	C	D	E	F	G	H	I	J
1	Date	Amount	Check No.	Description	Search Row	Index	Date	Amount	Check No.	Description
2	2/1/2019	1900		Transfer Deposit	8	1	2/13/2019	-300	214	Power
3	2/1/2019	-1500	211	Rent	12	2	3/13/2019	-220	218	Power
4	2/3/2019	-100	210	Groceries	16	3	4/13/2019	-180	223	Power
5	2/4/2019	1800		Deposit						
6	2/8/2019	-320	212	Transfer Withdrawal						
7	2/11/2019	-600	213	Auto Repair						
8	2/13/2019	-300	214	Power						
9	3/1/2019	1800		Deposit						
10	3/1/2019	-1500	215	Rent						
11	3/4/2019	-300	216	Groceries						
12	3/13/2019	-220	218	Power						
13	4/1/2019	1900		Transfer Deposit						
14	4/1/2019	-1500	219	Rent						
15	4/2/2019	-100	220	Groceries						
16	4/13/2019	-180	223	Power						

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Example 2. Concurrent filtering, grouped by keyword search, with or without column inversion:

	E	F	G	H	I	J
1	Search Row	Index	Date	Amount	Check No.	Description
2	8	10	2/13/2019	-300	214	Power
3	12	20	3/13/2019	-220	218	Power
4	16	30	4/13/2019	-180	223	Power
5						
6	Search Row	Index	Date	Amount	Check No.	Description
7	4	50	2/3/2019	-100	210	Groceries
8	11	150	3/4/2019	-300	216	Groceries
9	15	250	4/2/2019	-100	220	Groceries
10						
11	Search Row	Index	Description	Check No.	Amount	Date
12	2	1	Transfer Deposit		1900	2/1/2019
13	5	2	Deposit		1800	2/4/2019
14	9	3	Deposit		1800	3/1/2019
15	13	4	Transfer Deposit		1900	4/1/2019

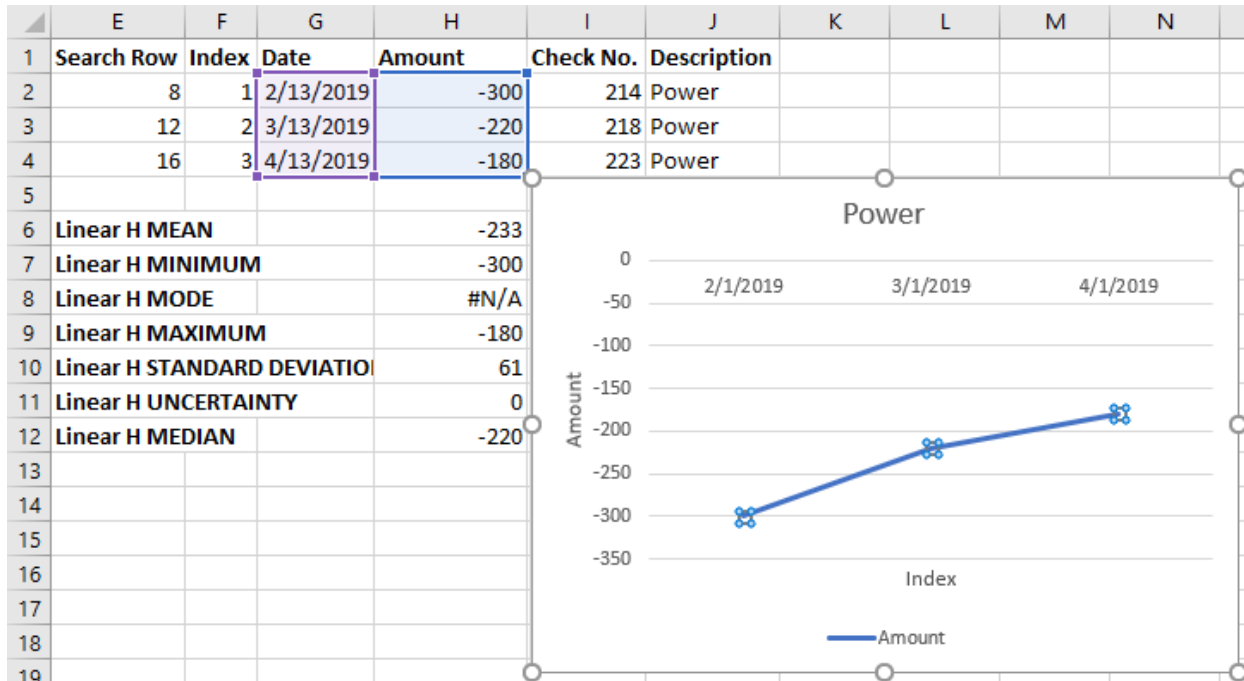
Example 3. Similar to above, but with filtering to exclude February data:

	E	F	G	H	I	J
1	Search Row	Index	Date	Amount	Check No.	Description
2	12	1	3/13/2019	-220	218	Power
3	16	2	4/13/2019	-180	223	Power
4						
5	Search Row	Index	Date	Amount	Check No.	Description
6	11	1	3/4/2019	-300	216	Groceries
7	15	2	4/2/2019	-100	220	Groceries
8						
9	Search Row	Index	Date	Amount	Check No.	Description
10	9	1	3/1/2019	1800		Deposit
11	13	2	4/1/2019	1900		Transfer Deposit

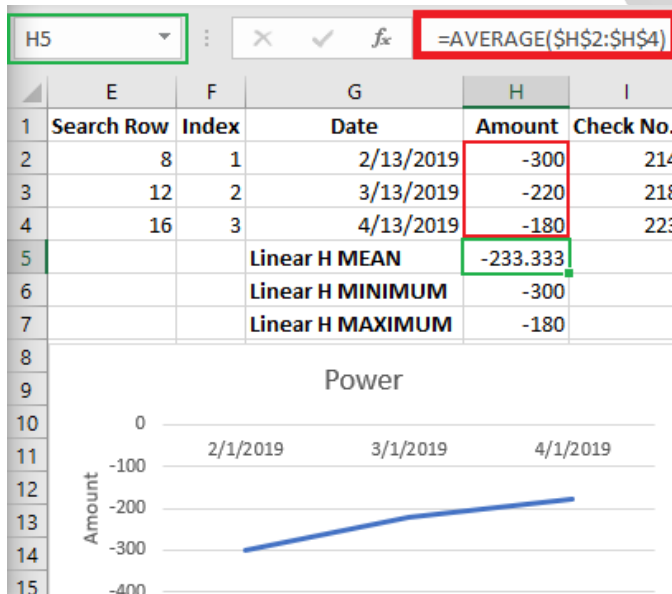
LINEAR GRAPH/ANALYSIS

SciPro Hawk™1 helps you graph linear plots and calculate optional statistics for your data. Dependent upon the edition of the software, you can linear plot multiple columns of data, and for specific rows. You can also see what equations were used to calculate statistics to help decipher data trends.

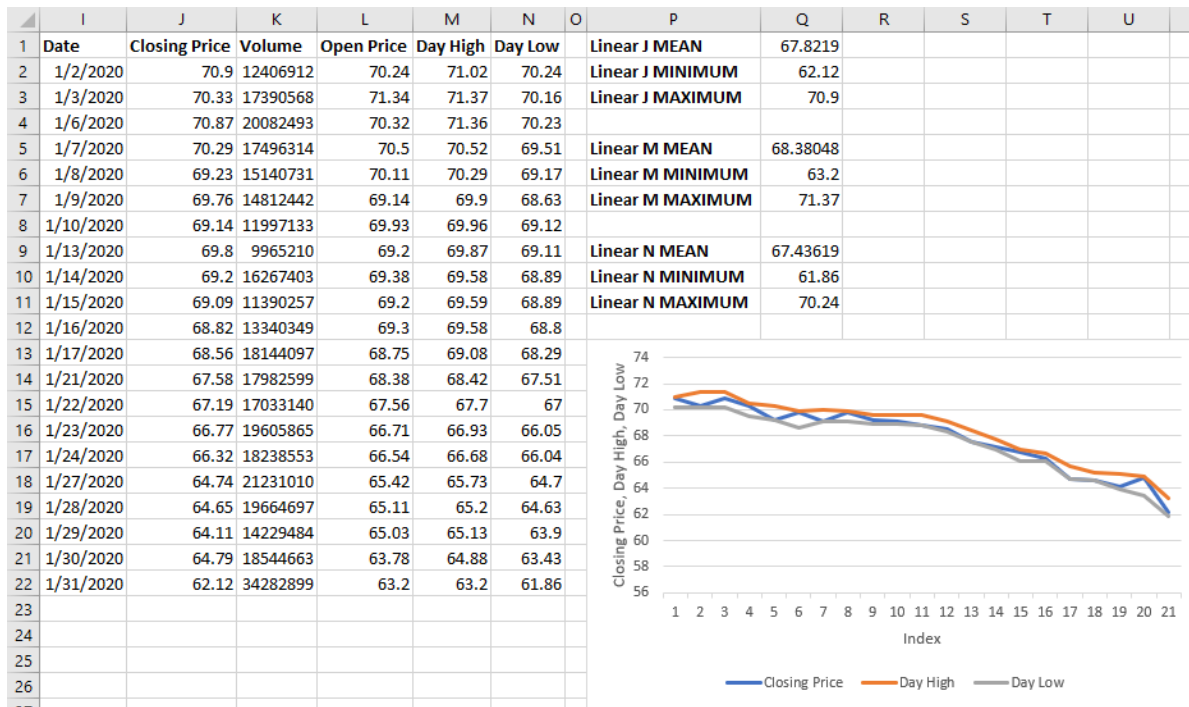
Example 1



Example 2



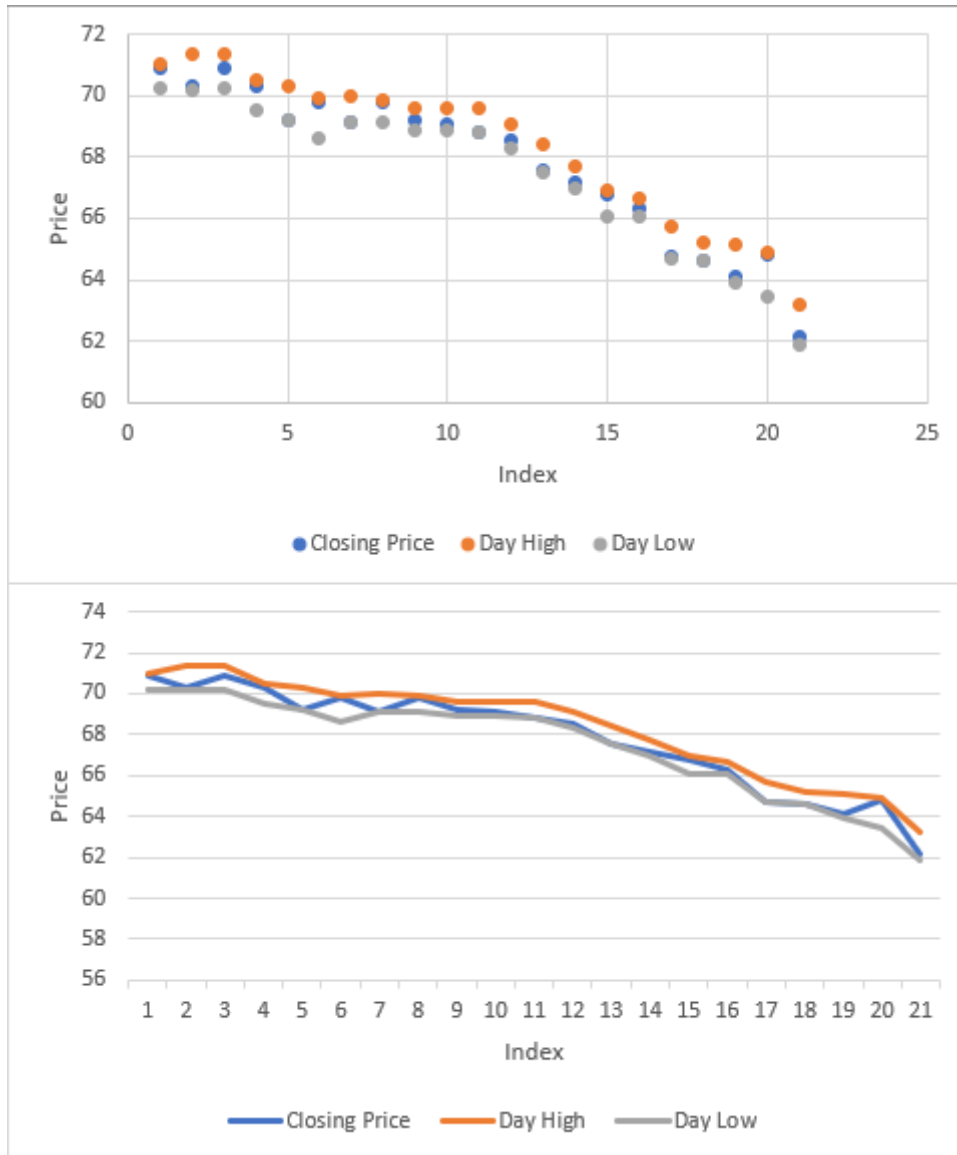
Example 3 Multiple columns (linear plots)



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SCATTER GRAPH/ANALYSIS

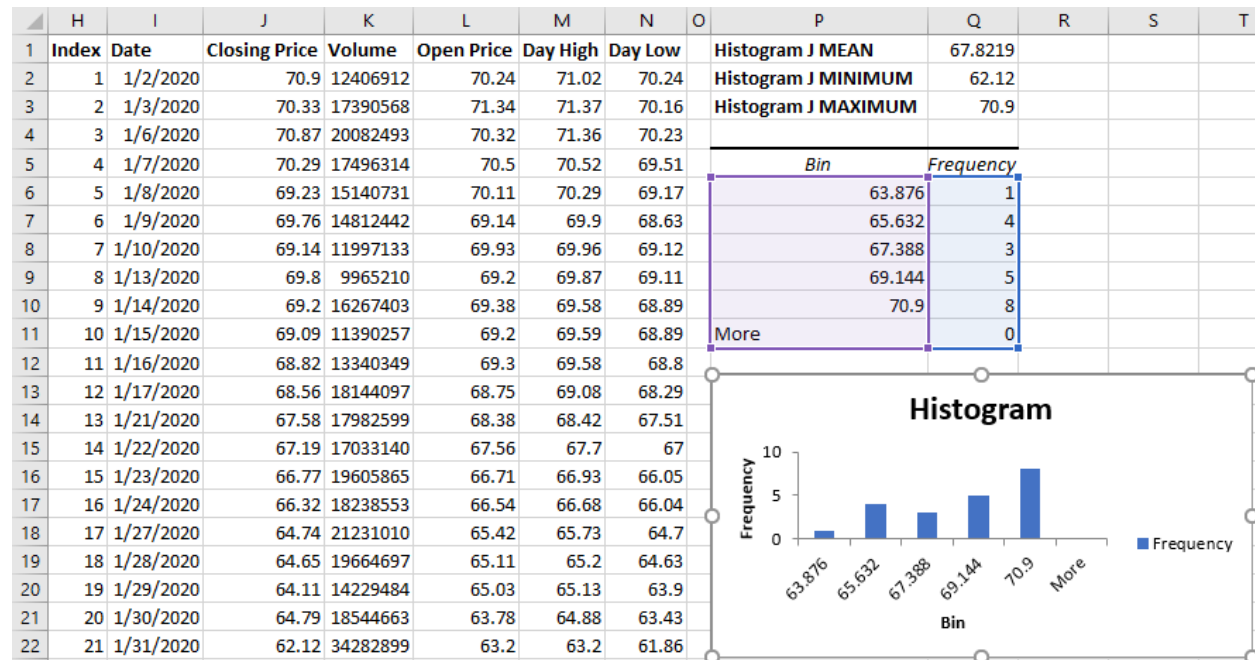
Similar to Linear graph type, but just plotting data points without line connections between points. Same functionality possible regarding capacity to calculate statistics. Dependent upon the edition of the software, you can scatter plot multiple columns of data, and for specific rows. You can also see what equations were used to calculate statistics to help decipher data trends. Example shown has scatter plot on top and a linear plot on bottom for comparison (taken from Linear graph/analysis example 3). You can plot both graphs at the same time, as well as other graphs.



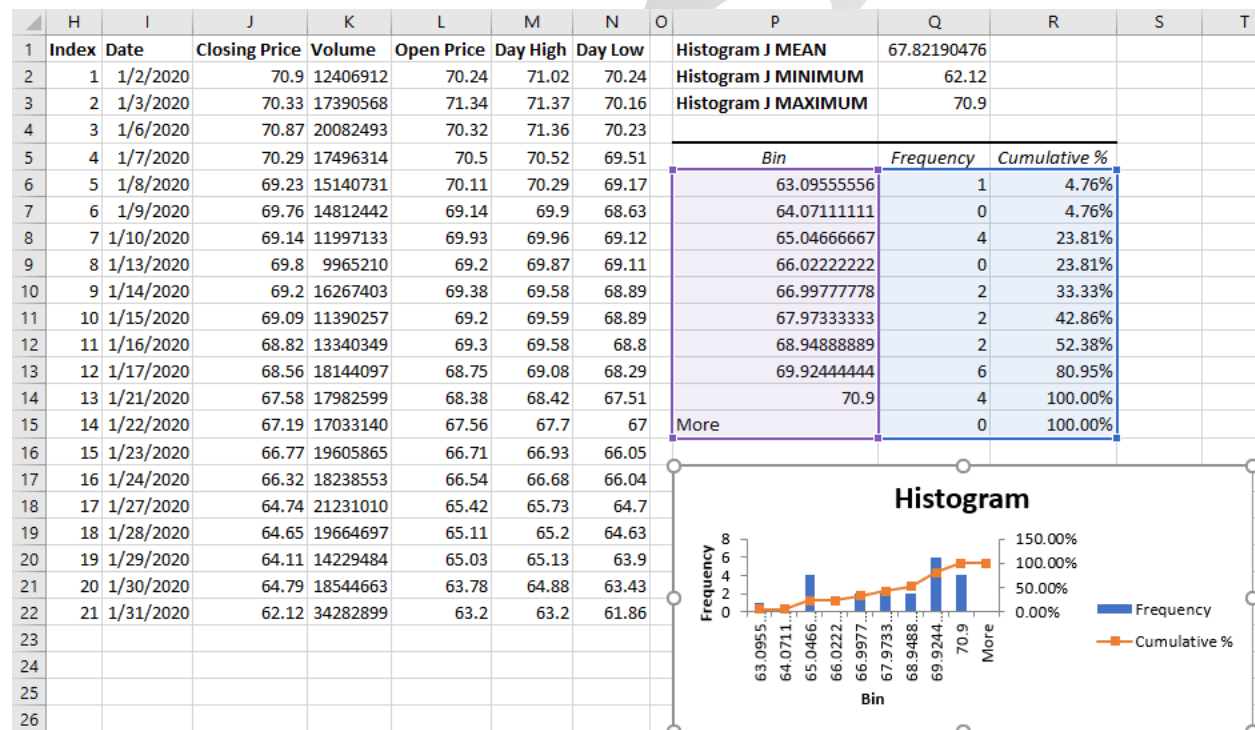
HISTOGRAM GRAPH/ANALYSIS

SciPro Hawk™1 helps you graph histograms and calculate optional statistics for your data. Can be restricted to specific rows. You can also see what equations were used to calculate statistics.

Example 1.

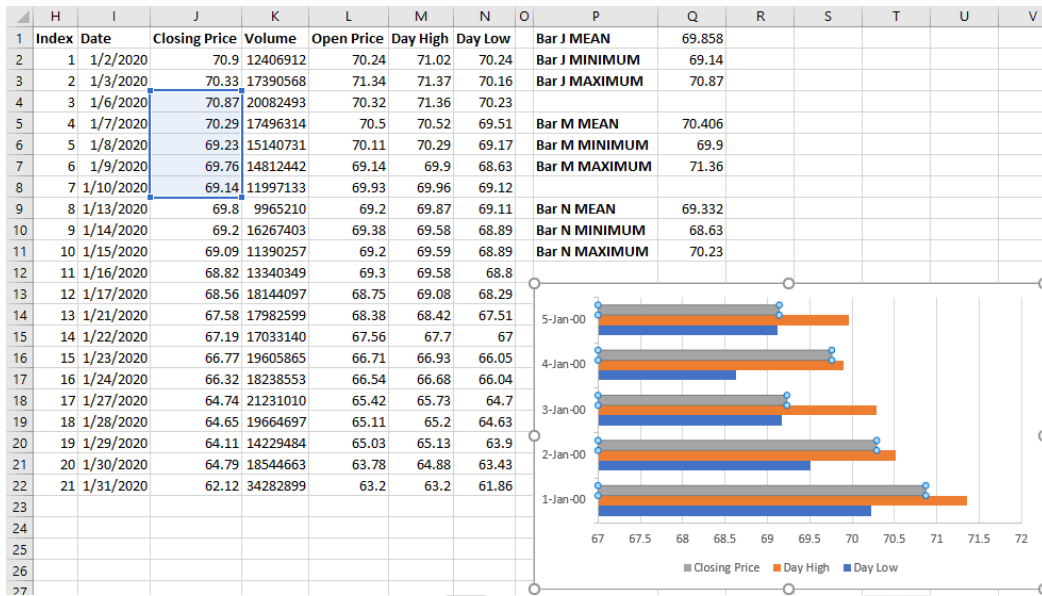


Example 2. With modified number of bins and with option to calculate cumulative percentages.



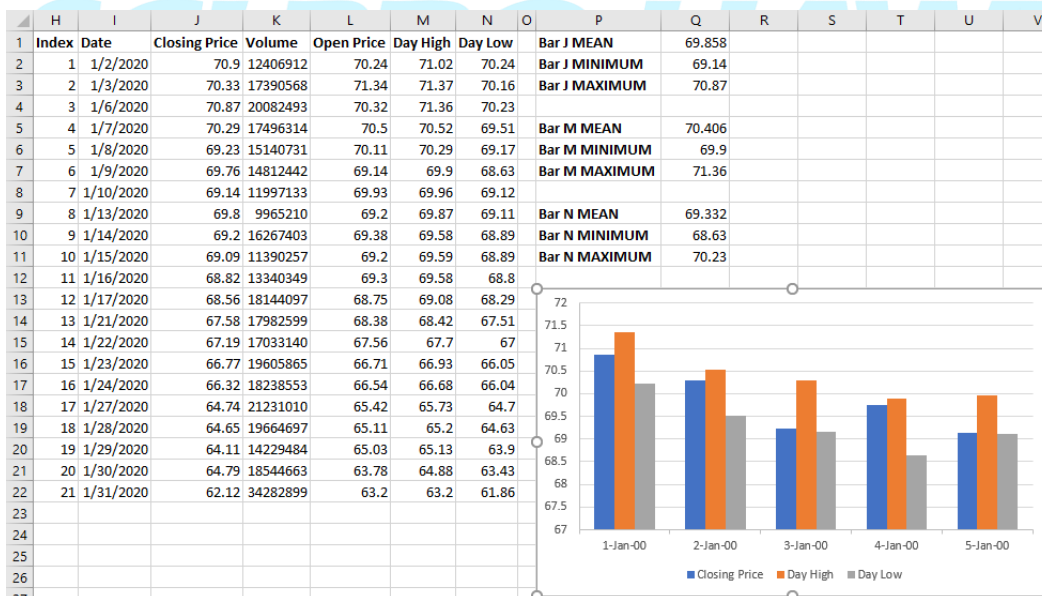
BAR GRAPH/ANALYSIS

SciPro Hawk™1 helps you graph bar chart plots and calculate optional statistics for your data. Dependent upon the edition of the software, you can plot multiple columns of data, and for specific rows. You can also see what equations were used to calculate statistics to help decipher data trends.



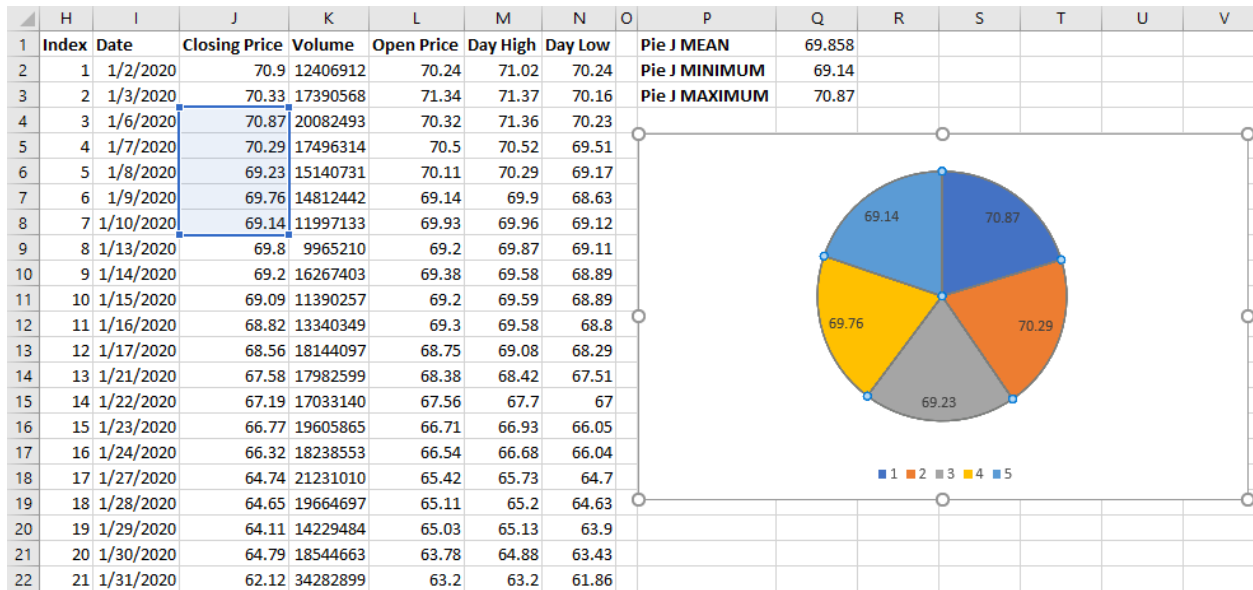
COLUMN GRAPH/ANALYSIS

Similar to bar graphs, SciPro Hawk™1 helps you graph column chart plots and calculate optional statistics for your data. Dependent upon the edition of the software, you can plot multiple columns of data, and for specific rows. You can also see what equations were used to calculate statistics to help decipher data trends.



PIE GRAPH/ANALYSIS

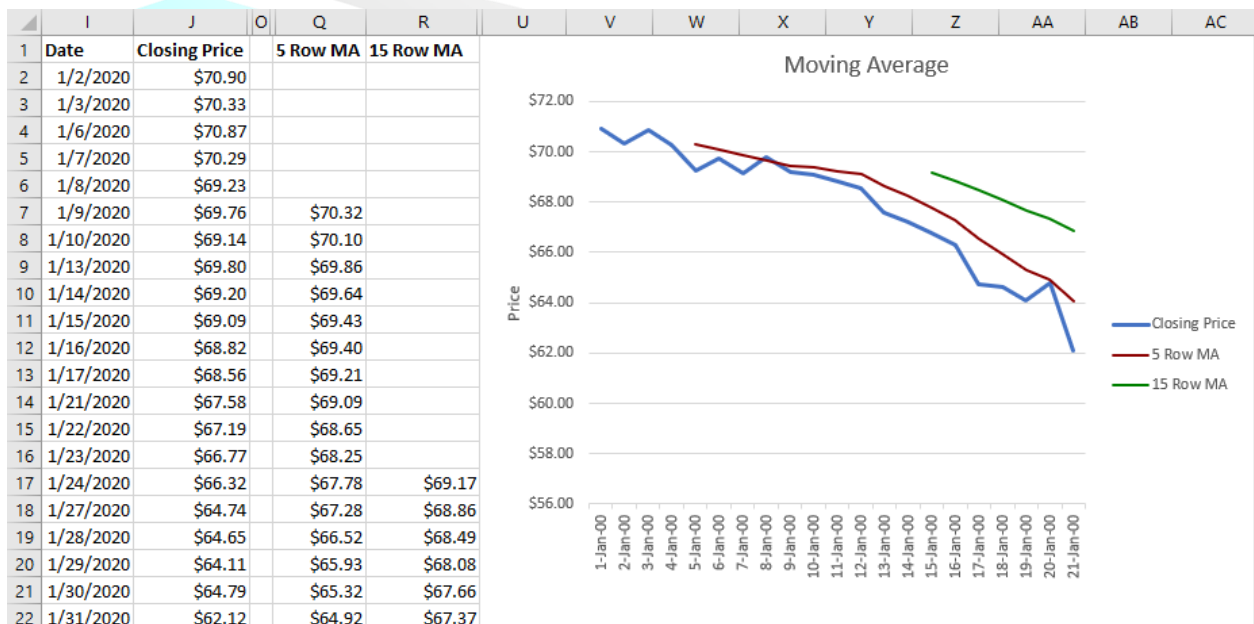
SciPro Hawk™1 helps you graph pie chart plots and calculate optional statistics for your data.. Can be restricted to specific rows. You can also see what equations were used to calculate statistics to help decipher data trends.



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MOVING AVERAGE GRAPH/ANALYSIS

1. SciPro Hawk™1 helps you calculate and graph moving averages (rolling averages) to help see data trending. You can also see what equations were used to calculate statistics. A Moving Average is a series of averages that progress through tabulation. In this example, Column J (Closing Price) was chosen for 2 different duration Moving Average calculations. Column Q was automatically chosen to tabulate a 5 Row (5 Day) Moving Average and Column R for tabulating a 15 Row (15 Day) MA. For instance, cell Q7 shows the result of averaging cells J2 through J6, then each succeeding row has the next rolling calculation. Baseline (column J Closing Price) and all moving averages tabulated are then plotted. The principle purpose of this type of graph is to see the trend of data. For example, if the Closing Price starts to cross over both trend lines, that can indicate a reverse in trend path.

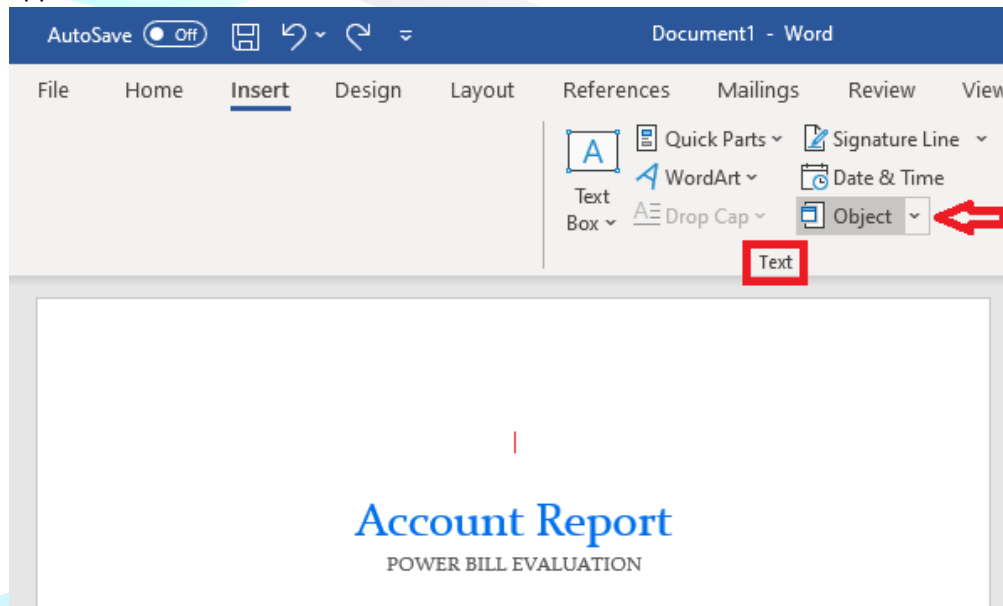


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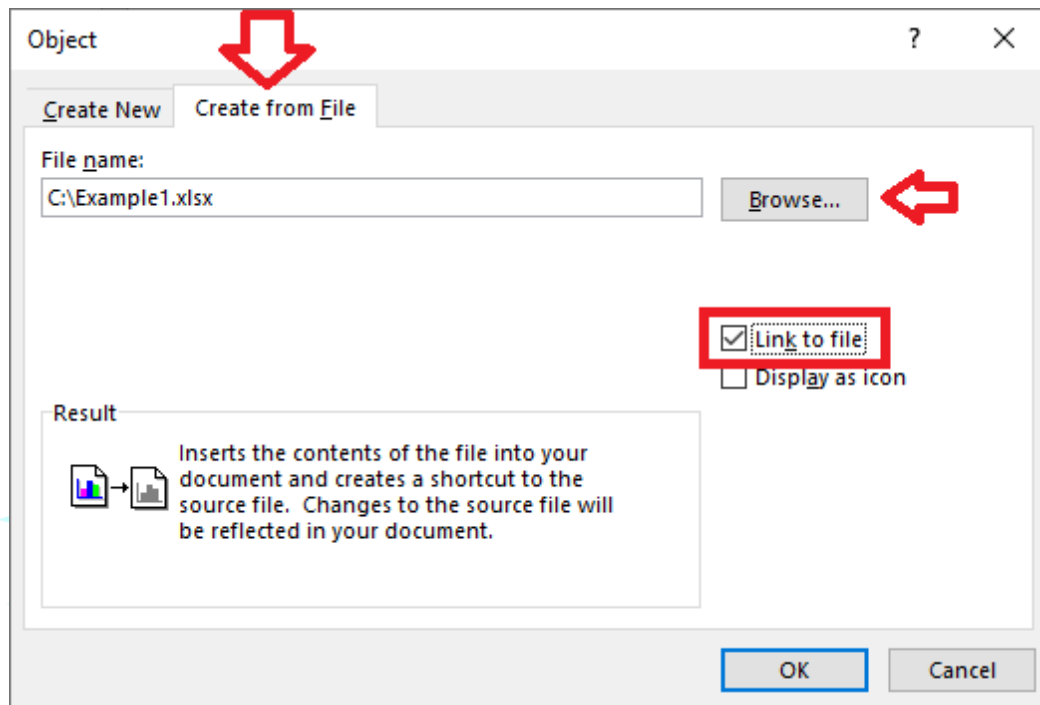
TIP: HOW TO LINK RESULTS INTO WORD OR POWERPOINT

You can save your Excel spreadsheet and subsequently link it into a Word, PowerPoint, or other document. Once you have used SciPro Hawk™1 to generate your data tabulations, graphs, and analyses, you can further modify aesthetics in Excel and then link your saved files into other applications like Word and PowerPoint. By setting up a link, you can update in Excel and then refresh in Word for example.

- a) Save your spreadsheet with the appearance that you would like. Think in terms of saving it like you would want to see it displayed in Word.
- b) From within Word, place your cursor where you want your Excel spreadsheet, then insert a text object as shown below. PowerPoint and other applications would use a similar approach.



- c) Per below, select Create from File tab, enter the File name (or click Browse to go get it), then make sure to check "Link to file" option. Click OK.



- d) Use the corner grips on the linked image you inserted to resize as you wish. You can go back to the Excel spreadsheet to make a change (font color, font size, add/subtract information, etc.), save the changes in Excel, then right click on the image in Word and select Update Link to refresh. Each time you open up a Word file that has a link like this embedded, Word will prompt you if you want to update with the data from the linked Excel spreadsheet (Yes or No) to enable a current refresh.

