Click Plot

Go to the Ribbon and select the ClickPlot option once the add-in is installed.

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Scatter Embedded Chart

1. Click Chart Set Up . It creates an empty chart.

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2. Click the chart on the sheet to activate it.

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3. Click Start on the Click Chart and Click anywhere you want to on the chart. The data is entered in range(A3:B50000). A1 shows number of data entered. A2 shows the chart name. You can type in the chart title in B2.



4. Click Reset to clear all the data entry. You can start again.



5. Click the chart and Click the Delete to delete both data table and chart. Make sure click the chart first otherwise it will give you an error.



Scatter Chart sheet

 First enter the chart name in the text box on the Pop up control and click Chart Set Up(ex. Bendoly). It creates new worksheet named "Bendoly" where data will be stored and Chart sheet named "Chart_Bendoly".



2. Click Start and click anywhere on the chart



3. Reset and Delete work same as in embedded chart.

Column, Line, Area Chart

Before set up the chart, make sure to prepare data table as follows.
 Enter X category on column A, data series 1 on column B, and data series 2 on column C.
 Leave A1 blank. You may skip the column heads (data series names).

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10	Sep			
11	Oct			
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13	Dec			a
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2. Click Chart Set Up.



3. Click Start and click on the chart. This click chart can be inaccurate when the chart is too small.



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- 4. Use Ctrl + Click (hold Ctrl key and mouse click) to enter secondary data series.

5. Reset and Delete work same as in Scatter Chart.

Screenshot for line chart and Area chart

Line Chart



Area Chart



This tool can be used to modify existing charts if the format and location of data tables are same, but the maximum and minimum scale of the chart should be always set Fixed.

Geocoder

This application allows the user to lookup latitude and longitude coordinates associated with a single address or a list of addresses. It can be found under the "Formulas" tab in the "Geocoding" group (see figure 1). Note: the application can geocode both addresses and zip codes.

Geocoding a list of addresses:

Upon clicking the "Address Geocoder" button, the application will open and will look as follows (see figure 2):

After opening the application, make sure the "By List" tab is selected, highlight the range containing the list of addresses, and click "Add Selected." You will see the range "address" appear in the textbox. Once the desired range is selected, click the "Geocode" button. The application will write the latitude and longitude data to the two cells directly to the right of the cells containing the addresses. Note: the application will overwrite any data that is in these cells. If the "Add Headers" box is checked, the application will add the headings "Latitude" and "Longitude"

Figure 3

Figure 2



above their respective columns (as shown in figure 4). If this box is not checked, only the latitude and longitude coordinates will be written to the adjacent cells.

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Figure 4

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Figure 5

Geocoding a single address:

To lookup the latitude and longitude of a single address, start by selecting the "By Cell" tab at the top of the application. Then, highlight the address that you wish to geocode and press "Add Selected" (see figure 6). Once the cell "address" appears in the textbox, press the "Geocode" button. The latitude and longitude of the selected address will appear in their respective textboxes (see figure 7).



Figure 6

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Figure 7

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Notes:

This geocoder tool utilizes the Google Geocoding API provided by Google, Inc. To prevent misuse, Google has restricted the number of geocoding requests to 2,500 per user per day. If this limit is reached, the appropriate error message will appear in the cell. For additional information, comments, or suggestions, please email Dave Wichman (dave.t.wichman@gmail.com).

PostgreSQL Excel Add-In

PostgreSQL is currently the fastest rising alternative database to commercial products like Oracle or recently acquired database MySQL. PostgreSQL implements strict SQL specifications compared to MySQL's not-so-strict implementation. In some research PostgreSQL is better at performing certain tasks (e.g. join/sub-querying <u>http://www.wikivs.com/wiki/MySQL_vs_PostgreSQL#PostgreSQL</u>) than MySQL, but to a large extent, we can consider these two databases equal.

This Excel Add-In provides automatic SQL generation with a GUI for users that are less familiar with SQL syntax.

It can finish following SQL tasks:

- Retrieve tables within one database
- Retrieve specific columns in a table
- Search for exact match of rows
- Fuzzy search
- Custom SQL execution

This Add-In also provides a very easy way to add ODBC driver to User/System DSN (DataSource Name).

Notice: this Add-In will not work on Macs, and if you are using Macs, congratulations, you already have very complete and strong database support. Go to Data tab and click Database from External Datasource.

What is DSN?

Programs use database drivers to connect to databases. Database developers for PostgreSQL and MySQL provide those drivers at their official website. For connecting to databases inside Excel, you have to download ODBC driver (there are also JDBC driver but it's for Java programs).

This is the ODBC Driver for PostgreSQL (<u>http://www.postgresql.org/ftp/odbc/versions/msi/</u>), simply download the latest version (at the very bottom). You will see two similar packages that read like psqlodbc_09_03_0300-x64.zip or psqlodbc_09_03_0300.zip. The -x64 at the end of file name is the indication of the machine you are running (64-bit vs 32-bit). However, you must not install the - x64 ending driver because Excel only works with 32-bit drivers (more precisely, the VBA - Visual Basic code only works with 32-bit driver; to be even more precise, it's the ActiveX Object (<u>http://en.wikipedia.org/wiki/ActiveX</u>) that VBA uses to connect to database, due to its lack of continuing development and old age cannot work with 64-bit driver).

After you download the zip file, decompress it and run the .msi MSI file and it will install automatically.

Then (here is why this Add-In is superior to current Windows database import option), ctrl-j to open this Add-In, click "List Data Source" button on the control panel. This will lead you to the correct DSN manager on your machine. It's worth mentioning you can't go to Control Panel\System and Security\Administrative Tools and open DataSource (ODBC), because if your machine is running on

Windows 64-bit, this shortcut will only lead you to 64-bit datasrouce manager, and 32-bit manager is hidden elsewhere, but don't worry, once you click "List Data Source", it will take you to the correct version.

Click "list data source" button and it will lead you to system Database Source

Manager. Then click "Drivers" tab. If you have already installed the corresponding driver, it will show up (you might have to scroll down the list). Click "User DSN" tab, click "add" button, and fill the requested fields (server name, user name, password... you can find tutorials online on how to fill those fields). If you are truly uncertain, this is an example for PostgreSQL:

PostgreSQL Uni	icode ODBC Driver (p	osqlODBC) Setup		8
Data Source	psql_server_uni_32	Description	32-bit PostgreSQL Un	ni Connect
Database	ExcelDemo	SSL Mode	disable	•
Server	localhost	Port	5432	
User Name	postgres	Password	••••	
Options				Test
Datasource	Global	Manage DSN	Save	Cancel

After filling out the fields, click "test" to test your connection and if it passes, congrats, you have your DSN and forever save you from the cumbersome filling in user name and passwords again!

Then write down your DSN name (the "DataSource" field in "add" screen). For the example above, the DSN name is "psql_server_uni_32". Put this name down on the "Data Source" field of this Add-In and done! (Don't click "Connect" button just yet because you will need a table name to retrieve your record)

<u>Control Panel</u>

This is the quick access control panel, where you can't do a lot of stuff with SQL. The fields and buttons quickly generate SQL clauses that retrieve all the columns (fields) in your table. Before you click "Connect", you have to fill in the table name field. If you don't remember any table name, go to Data Panel. It should be pretty straight forward. You are not required to put in a row limit, but it's suggested to put in one. The generated SQL textbox is locked and can't be edited. If you want to write custom SQL, go to Data Panel.

Database Access For	m	83
Welcom	e to Database to Excel System	
Control Panel Dat	a Panel Wiki	
Database Type:	PostgreSQL 💌	
Data Source:	psql_server_uni_32 List data srouce	
Table Name:	demo	
Row Limit:	1000	
	Connect	
Generated SQL Q	uery	
SELECT * FRO	M demo LIMIT 1000	

<u>Data Panel</u>

If you don't remember your table name, click the drop down button on the "table name" field and it will show you all the tables in your database. Click "get columns" after you fill in the table name, and you can select one or multiple columns. If you want to use more advanced PostgreSQL clauses or functions, you can customize the generated SQL textbox down and execute the query just like you would do in a command line setting.

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Notice & Wiki



1. Not all the SQL clauses are tested on MySQL, but it should work just fine.

2. Currently "Categorized By" field is removed due to the specialty of GROUP BY syntax.

3. If you want to use this Add-In to connect to MySQL, you can find corresponding ODBC driver here (<u>http://dev.mysql.com/downloads/connector/odbc/</u>).

4. This Add-In does not work for Mac. If you are a professional user and wish to have stronger functionalities, try Power BI for Office 365 product for \$52 per user per month.

5. If you have any concern or suggestion, feel free to send me an

email: aimingnie@gmail.com

Heat Map Developer

Heat Mapper utility

The tool pulls a pre-specified set of images from an on-line library of html shape data. The popup userform allows the user to specify the library (e.g. geography, blueprints, etc.) and specific shape set from that library pull shape data from. The user is further permitted the ability to select a subset of shapes from that set to create from that data. Color scale specifications are provided at this point, as is the ability to conduct some basic manipulations (flip). A base cell for the graphic generation is specified along with a sheet for generation.

For certain special shape sets additional capabilities exist. For example if the US contiguous state set is selected, the lower button "Apply States--> Counties" shifts from a state-wise selection to the selection of all counties associated with any pre-selected states (and easy way to specify all Georgia counties to map for example). The user also has the choice of labelling longitude and latitude on certain geographic depictions.



Two examples of the heat mapping result are provided below (one lower Manhattan, one an automotive model view set). Once the shapes are created the user can replace the data in column B with real data (or reference to such, or a calculation). The user then has the choice of either applying the color scale scheme to the depiction the heatmap by differences in column B values or to apply whatever fills are present (modifiable) in column A.





Shape Extractor utility

If the user already has a new polygon drawn image in the spreadsheet that they would like to convert to an html file and add to the library shared with everyone, hitting the associated ribbon button provide the following popup userform for extraction purpose. The user can then contact the developer to make sure the new file is included in the appropriate library.

lease make sure t hapes you are inti	he active sheet has only the draw erested in (polygons only please)
pecify the path	for the new file :
C:\Users\bendol	y\Desktop\
pecify the new	file name :
pecify the new NewLibrary.html	file name :

Composition Scatters

This add-in is used to visualize data across multiple dimensions, a feature not available within Excel's stock form. Users can use the tool to plot data across both X and Y axes, with each data point representing a plot of multiple Z data points. This allows for more expansive yet consolidated statistics work within Excel.

<u>Create</u>

Upon clicking, a user form will appear and prompt you to fill in the appropriate information from your data set. After completing all information and selecting "Create Graph", your data will be visualized within the composition scatter.

<u>Zoom</u>

Once your graph has been created, the Zoom tool can be used to enhance the mini Z graphs within your scatter plot.Select the individual point that you wish to enhance, and then click the Zoom tool on the ribbon. The zoomed image retains all features of a typical Excel graph, so feel free to copy it, reformat it, etc.

Change Marker Size

This program allows the user to change the size of the Z data markers (pie/bar). To utilize, select the scatter plot that houses the z charts that you wish to resize. If a whole scatter plot is not selected, the user will be shown a prompt to reselect. Once a plot is selected and the ribbon icon is clicked, input the size you wish the z data markers to take on.

The add-in was developed by a team of sophisticated software designers located at Emory University, composed of: Sam Kuttig, Hyun Hee Lee, Jeffrey Fanlong Meng and Alex Wald

Please email multigraphaddin@gmail.com for any questions regarding this program.

Confidence Ovals

The tool plots confidence intervals around means of samples, given the following descriptors for each sample (samplename, xmean, ymean, xstddev, ystddev, %confinterval). Have that data available to begin with then select the associated ribbon button to activate the popup and specify your data samples, along with plot preferences (color scheme, etc.)

