

**TECH  
TALENT**  
SOUTH

# Productivity in Excel

# What is Excel?

Excel is a spreadsheet developed and updated by Microsoft and can be used for Window, macOS, iOS, and Android operating systems.

The earliest version for Windows was Excel 2.0 and was released in 1987. Even the earliest version included macros (automation of repetitive tasks) and user-defined functions.



# What is Excel?

Excel has the basic features of all spreadsheets. Those features include using a grid of *cells* arranged in numbered *rows* and letter-named *columns* to organize data manipulations like arithmetic operations.

Excel includes hundreds of functions to answer statistical, engineering, and financial needs.

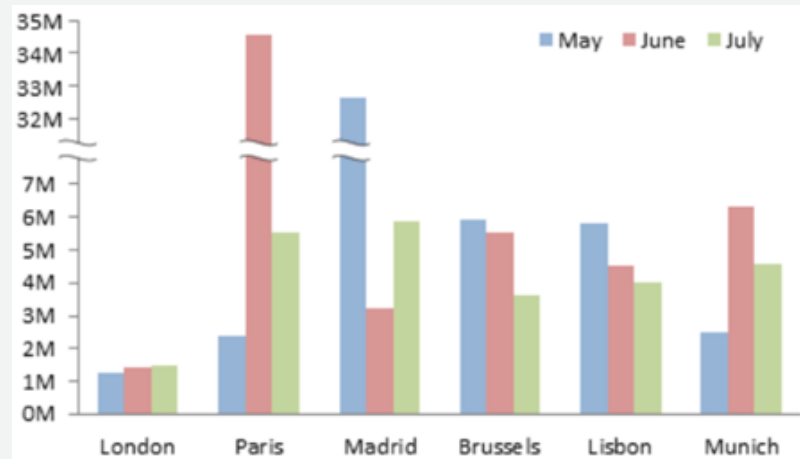
Additional features include sectioning of data to view its dependencies on various factors for different perspectives and support programming through Visual Basic for Applications (VBA)

# Limitations

Not a production solution

Ideal for quick dive and small plots for non-data people

Easier to mislead with Excel Graphs



# Limitations

## Large Calculations

- Excel is slow and inefficient for larger computations.
- Not going to be fun to automate and forget about reproducibility.
- Ever open a 100k row CSV?



# Improving Workflow

This course assumes you have at least some knowledge of Excel. For this next portion, we'll be working on making your workflow quicker and more efficient.

The following slides include various keyboard shortcuts to speed things up while you're working. You aren't expected to memorize them all, but it's good to know what options are out there. That way, if you find yourself doing something you remember there being a shortcut for, you can reference back and use them as needed!

# Improving Workflow

We'll go over each shortcut. Some of them utilize Excel features you may not be familiar with.

We will demo each shortcut and give you a chance to practice. If you have a question about what a shortcut is doing, when it would be used, or a deeper explanation of the features it provides, ask your instructor!



# Shortcuts

If a shortcut requires pressing two or more keys at the same time, this topic separates the keys with a plus sign (+). If you have to press one key immediately after another, the keys are separated by a comma (,).

Close a spreadsheet *Ctrl + W*

Open a spreadsheet *Ctrl + O*

Go to the Home tab *Alt + H*

Save a spreadsheet *Ctrl + S*

Copy *Ctrl + C*

Paste *Ctrl + V*

Remove cell contents *Delete*

Choose a fill color *Alt + H, H*

Go to the Insert tab *Alt + N*

Bold *Ctrl + B*

Undo *Ctrl + Z*

Cut *Ctrl + X*



# Shortcuts

Center align cell contents *Alt + H, A, then C*

Go to Alt tab *Alt + A*

Go to the Page Layout tab *Alt + P*

Go to View tab *Alt + W*

Add borders *Alt + H, B*

Delete Columns *Alt + H, D, then C*

Go to Formula tab *Alt + M*

Format a cell from context menu  
*Shift + F10 or Context key*



# The Ribbon

If you're new to the Ribbon, the information in this section can help you understand the Ribbon's keyboard shortcut model. The Ribbon comes with new shortcuts, called *Access Keys*. To see visible key tips for the access keys, just press the Alt key.

# The Ribbon

Open the Tell me box and type a search term for assistance *Alt+Q*, and then enter a search term

Open the File page and use Backstage view *Alt+F*

Open the Home tab and format text and numbers using the Find tool *Alt+H*

Open the Insert tab and insert items *Alt+N*

Open the Draw tab to select a drawing tool, color, and line thickness *Alt+J*

Open the Page Layout tab *Alt+P*

Open the Formulas tab *Alt+M*

# The Ribbon

Open the Data tab *Alt+A*

Move the focus to commands on the Ribbon *Tab or Shift+Tab*

Open the Review tab *Alt+R*

Move down, up, left, or right among items on the Ribbon *Arrow Keys*

Open the View tab *Alt+W*

Activate a selected button  
*Spacebar or Enter*

Select the active tab of the Ribbon, and activate access keys  
*Alt or F10. Move to a different tab using access keys or arrow keys*

# The Ribbon

Open the list for a selected command *Down Arrow Key*

Open a context menu *Shift+F10*

Open the menu for a selected button *Alt+Down Arrow Key*

Move to the submenu when a main menu is open or selected *Left Arrow key*

When a menu or submenu is open, move to the next command  
*Down Arrow key*

Expand or collapse the Ribbon  
*Ctrl+F1*

# Format in Cells Shortcuts

Format using Format Cells dialog box *Ctrl+1*

Insert blank cells with the Insert dialog box *Ctrl+Shift+Plus (+)*

Format fonts in the Format Cells dialog box *Ctrl+Shift+F* or *Ctrl+Shift+P*

Display the Delete dialog box to delete selected cells *Ctrl+Shift+Plus(+)*

Edit the active cell and put the insertion point at the end of its contents. *F2*

Display the Delete dialog box to delete selected cells *Ctrl+Minus(-)*

Add or edit a cell comment *Shift+F2*

Enter the current time *Ctrl+Shift+colon(:)*

# Format in Cells Shortcuts

Enter the current date

*Ctrl+semicolon (;)*

Switch between displaying cell values or formulas in the worksheet *Ctrl+grave accent(`)*

Copy a formula from the cell above the active cell into the cell or the Formula Bar  
*Ctrl+apostrophe(')*

Move the selected cells *Ctrl+X*

Copy the selected cells *Ctrl+C*

Paste content at the insertion point, replacing any section *Ctrl+V*

Paste content by using the Paste Special dialog box *Ctrl+Alt+V*

Italicize text or remove italic formatting *Ctrl+I* or *Ctrl+3*

# Format in Cells Shortcuts

Bold text or remove bold formatting *Ctrl+B* or *Ctrl+2*

Underline text or remove underline *Ctrl+U* or *Ctrl+4*

Apply or remove strikethrough formatting *Ctrl+5*

Switch between hiding objects, displaying objects, and displaying placeholders for objects *Ctrl+6*

Apply an outline border to the selected cells  
*Ctrl+Shift+ampersand (&)*

Remove the outline border from the selected cells  
*Ctrl+Shift+underscore (\_)*

Display or hide the outline symbols  
*Ctrl+8*

Hide the selected rows *Ctrl+9*



# Format in Cells Shortcuts

Hide the selected columns *Ctrl+0*

Use the Fill Down command to copy the contents and format of the topmost cell of a selected range into the cells below *Ctrl+D*

Use the Fill Right command  
*Ctrl+R*

Apply the General number format  
*Ctrl+Shift+tilde (~)*

Apply the Currency format with two decimal places (negative numbers in parentheses)  
*Ctrl+Shift+dollar sign (\$)*

Apply the Percentage format with no decimal places  
*Ctrl+Shift+percent (%)*

Apply the Scientific number format with two decimal places  
*Ctrl+Shift+caret (^)*

# Format in Cells Shortcuts

Apply the Date format with the day, month, and year

*Ctrl+Shift+number sign (#)*

Apply the Time format with the hour and minute, and AM or PM

*Ctrl+Shift+at sign (@)*

Apply the Number format with two decimal places, thousands separator, and minus sign (-) for negative values

*Ctrl+Shift+exclamation point (!)*

Create or edit a hyperlink *Ctrl+K*

Check the spelling in the active worksheet or selected range *F7*

Display the Quick Analysis options for selected cells that contain data

*Ctrl+Q*

Display the Create Table dialog box *Ctrl+L* or *Ctrl+T*

# Make Selections/Perform Actions

Select the entire worksheet  
*Ctrl+A* or *Ctrl+Shift+Spacebar*

Extend the selection of cells by one  
cell *Shift+arrow key*

Select the current and next sheet  
in a workbook *Ctrl+Shift+Page  
Down*

Extend the selection of cells to the  
last nonblank cell in the same  
column or row as the active cell, or  
if the next cell is blank, to the next  
nonblank cell *Ctrl+Shift+arrow  
key*

Select the current and previous  
sheet in a workbook  
*Ctrl+Shift+Page up*

Turn extend mode on and use the  
arrow keys to extend a selection  
(press again to turn off) *F8*

# Make Selections/Perform Actions

Add a non-adjacent cell or range to a selection of cells by using the arrow keys *Shift+F8*

Start a new line in the same cell  
*Alt+Enter*

Fill the selected cell range with the current entry *Ctrl+Enter*

Complete a cell entry and select the cell above *Shift+Enter*

Select an entire column in a worksheet *Ctrl+Spacebar*

Select an entire row in a worksheet *Shift+Spacebar*

Select all objects on a worksheet when an object is selected  
*Ctrl+Shift+Spacebar*

Extend the selection of cells to the beginning of the worksheet  
*Ctrl+Shift+Home*

# Make Selections/Perform Actions

Select the current region if the worksheet contains data. Press a second time to select the current region and its summary rows. press a third time to select the entire worksheet. *Ctrl+A* or *Ctrl+Shift+Spacebar*

Select the current region around the active cell or select an entire PivotTable report  
*Ctrl+Shift+asterisk (\*)*

Select the first command on the menu when a menu or submenu is visible *Home*

Repeat the last command or action, if possible *Ctrl+Y*

Undo the last action *Ctrl+Z*

# Data/Functions/Formula Bar

Select an entire PivotTable report

*Ctrl+Shift+asterisk (\*)*

Expand or collapse the Formula

Bar *Ctrl+Shift+U*

Edit the active cell and put the insertion point at the end of its contents. Or, if editing is turned off for the cell, move the insertion point into the formula bar. If editing a formula, toggle Point mode off or on so you can use the arrow keys to create a reference.

*F2*

Cancel an entry in the cell or Formula Bar *Esc*

Complete an entry in the formula bar and select the cell below *Enter*

Move the cursor to the end of the text when in the formula bar

*Ctrl+End*

# Data/Functions/Formula Bar

Select all text in the formula bar  
from the cursor position to the  
end *Ctrl+Shift+End*

Calculate all worksheets in all  
open workbooks *F9*

Calculate the active worksheet  
*Shift+F9*

Calculate all worksheets in all  
open workbooks, regardless of  
whether they have changed since  
the last calculation *Ctrl+Alt+F9*

Display the menu or message for  
an Error Checking button  
*Alt+Shift+F10*

Display the Function Arguments  
dialog box when the insertion  
point is to the right of a function  
name in a formula *Ctrl+A*

# Data/Functions/Formula Bar

Insert argument names and parentheses when the insertion point is to the right of a function name in a formula *Ctrl+Shift+A*

Cycle through all combinations of absolute and relative references in a formula if a cell reference or range is selected *F4*

Invoke Flash Fill to automatically recognize patterns in adjacent columns and fill the current column *Ctrl+E*

Insert a function *Shift+F3*

Copy the value from the cell above the active cell into the cell or the formula bar *Ctrl+Shift+straight quotation mark (")*



# Data/Functions/Formula Bar

Create an embedded chart of the data in the current range *Alt+F1*

Move to the first field in the next record of a data form *Enter*

Create a chart of the data in the current range in a separate Chart sheet *F11*

Create, run, edit, or delete a macro  
*Alt+F8*

Define a name to use in references *Alt+M, M, D*

Open the Microsoft Visual Basic for Applications Editor *Alt+F11*

Paste a name from the Paste Name dialog box (if names have been defined in the workbook) *F3*

