Techionista Academy

Hard Skills

Becoming an Excel Pro

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Videos

If you see anything that has a play button, it surely has a link to a video that you want to watch, so just click play and you'll have a new window with the video opened.

Links

Bold underlined text in Plum color is a clickable link. **I am a link, click me!**

Pointer

This pointing hand icon invites you to click the element it's pointing to.

Introduction to Excel as a Tool

What is Excel?

What is Excel?

Excel is a powerful and widely used spreadsheet software developed by Microsoft. It allows users to store, organize, and analyze data in a grid of cells organized in rows and columns. Excel provides a range of features, including formulas, functions, charts, and graphs, that make it easy to perform calculations, analyze data, and create reports.

Why you should use Excel

Learning how to use Excel is important for many reasons, particularly in today's data-driven world. Here are a few reasons why:

- **Improved productivity**: Excel enables you to perform complex calculations and analysis more efficiently than doing them manually, saving you time and increasing your productivity.
- **Data organization**: Excel provides a structured way to store and organize data, making it easier to access and manage large amounts of information.
- **Data analysis**: Excel's powerful analysis tools enable you to manipulate data in a variety of ways, including sorting, filtering, and creating charts and graphs, allowing you to gain insights and make informed decisions.
- **Business applications**: Excel is commonly used in business for tasks such as budgeting, financial analysis, forecasting, and data visualization. Knowing how to use Excel can give you an advantage in many job roles.
- **Personal finance**: Excel can be a useful tool for personal finance management, such as tracking expenses, creating budgets, and forecasting future spending.
- **Collaboration**: Excel's sharing and collaboration features allow multiple users to work on the same document simultaneously, making it easier to work in teams and share information.

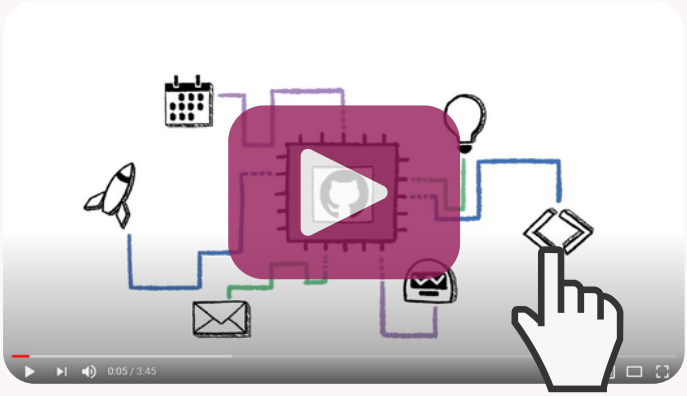
About Excel

Excel was first released in 1985 by Microsoft, and it quickly became a popular tool for **data management** and **analysis**. The software is a **spreadsheet** program, which means it organizes data into rows and columns, allowing users to perform calculations and analyses on them. Before spreadsheets, data was managed manually through paper records or with the help of computers using databases.

Databases are collections of data that are organized in a structured way, allowing for efficient storage and retrieval of information. Databases are commonly used in business and other organizations to manage and analyze large amounts of data. Spreadsheets are a lot easier and cheaper to create and maintain. If you don't need to work with a LOT of data, if you don't need to have a lot of security precautions, or if you want a more accessible interface, spreadsheets are the way to go.

Excel revolutionized the spreadsheet market by offering a user-friendly interface and a wide range of features that made it easy for non-experts to use. Since its release, Excel has evolved to include more advanced features, making it a great tool even for powerful data management and analysis.

Here is a great video to further explain the differences between spreadsheets and databases and how to decide which is the best approach for your data needs:



Applications

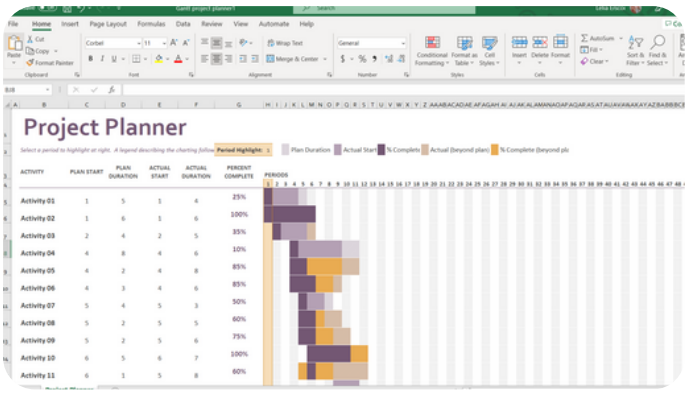
Budgeting and financial analysis
Excel is widely used for creating and managing budgets, tracking expenses, and performing financial analysis. You can use Excel to create spreadsheets that track income and expenses, calculate financial ratios, and create charts and graphs to visualize financial data.

Data analysis and visualization
Excel is a powerful tool for data analysis and visualization, allowing users to sort, filter, and analyze large data sets. You can use Excel to create pivot tables, charts, and graphs to help you better understand your data and make informed decisions.

Project management
Excel can be used to create project plans, track progress, and manage resources. You can use Excel to create Gantt charts, project timelines, and other project management tools to help you stay on track and meet your project goals.

Inventory management
Excel can be used to create inventory spreadsheets that track items, quantities, and locations. You can use Excel to create alerts and notifications when inventory levels fall below certain thresholds, helping you to manage your inventory more efficiently.

Sales and marketing
Excel can be used to create sales forecasts, track sales leads, and analyze marketing data. You can use Excel to create spreadsheets that track sales performance, calculate customer lifetime value, and create charts and graphs to visualize marketing data.



Helpful Definitions

Data
Any piece of information or raw facts that can be collected, stored, and analyzed.

Gantt Chart
A type of bar chart that is commonly used in project management to show the schedule of a project. It is named after Henry Gantt, who developed the chart in the early 1900s. A Gantt chart shows the start and end dates of individual tasks or activities, as well as their duration and dependencies. This allows project managers to visualize the timeline of a project, identify potential delays, and make adjustments to the schedule as needed.

Getting Started

How to set started with your first Excel project

Glossary

Cell
The intersection of a row and a column in a worksheet where you can enter, edit, and display data, formulas, or functions. A cell is identified by a unique combination of its column letter and row number, such as A1 or C7.

Row
A row refers to a horizontal series of cells that are identified by a number along the left-hand side of the row. Each row contains cells that share a common number identifier, such as 1, 2, 3, and so on.

Column
A column refers to a vertical series of cells that are identified by a letter at the top of the column. Each column contains cells that share a common letter identifier, such as A, B, C, and so on.

Worksheet
A single spreadsheet within a workbook where you can enter, organize, and analyze data. Can also be referred to as a Tab.

Worksheets are the primary way that users organize and manipulate data within a workbook. A single workbook can contain multiple worksheets, each with its own unique name and data. This allows users to organize related data into separate tabs or sections within a single file.

Workbook
A file containing one or more worksheets.

Workbooks are the primary way that users organize and manage data in Excel. A single workbook can contain multiple worksheets, allowing you to organize related data into separate tabs or sections. For example, a financial analyst might create a workbook that contains separate worksheets for revenue, expenses, and profit analysis.

Formula
A formula is an equation that performs a calculation or operation on data in one or more cells. Formulas can include cell references, values, and functions, and are typically used to perform calculations and manipulate data within a worksheet.

Function
A function is a built-in formula that performs a specific calculation or operation on data in one or more cells, such as SUM or AVERAGE. Functions can be used to perform a wide variety of tasks, from basic arithmetic calculations to complex statistical analysis and everything in between.

Range
A range refers to a group of two or more cells that are adjacent to each other and selected together. A range can be a single cell, a row, a column, or a rectangular group of cells that spans multiple rows and/or columns.

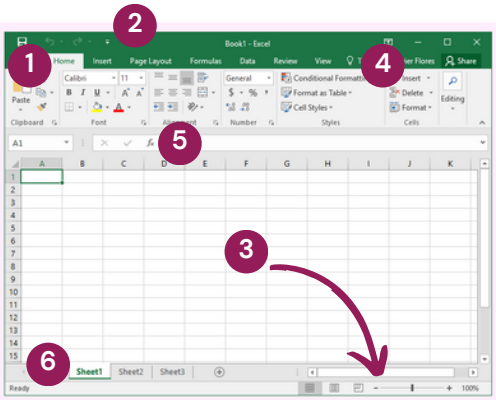
Ranges are identified by the cell reference of the top-left and bottom-right cells in the range, separated by a colon. For example, the range of cells from A1 to B5 would be identified as "A1:B5".

Ribbon
The Ribbon is a user interface element in Microsoft Excel that contains a collection of tabs, each of which contains groups of related commands. The Ribbon is also customizable, allowing users to add or remove tabs and groups, create custom tabs and groups, and rearrange commands within groups.

First Steps

Step 1. Open Excel
When starting Excel for the first time, you will be welcomed with the **Excel Start Screen.** Here, you can create a **new workbook**, find your recently opened workbooks, as well as choose a **template** for your project**.**

Step 2. Get Used to the Excel Window



1. **The Ribbon**: helps you navigate Excel and access its many powerful features and functions. The tabs on the Ribbon are organized by task, such as Insert, Home, Page Layout, Formulas, Data, Review, and View, and each tab contains groups of commands related to that task.
2. **Quick Access Toolbar:** a customizable toolbar that contains frequently used commands. Here you can add, remove, or rearrange your favorite commands.
3. **Worksheet Area**: the main area where you enter and edit data. You can use the scroll bars and the zoom in and out options to view the worksheet at different magnifications.
4. **The Microsoft Account button:** a feature in Excel that allows you to sign in to your Microsoft account and access your cloud-based files and settings.
5. **The Formula Bar**: where you can view and edit the contents of a cell, including any formulas, functions, or text that you've entered.
6. **Your Worksheets**: here you can navigate between, create, rename, or delete worksheets.

Step 3. Add Data
Once you have a workbook open, you can enter data in one of 2 ways:

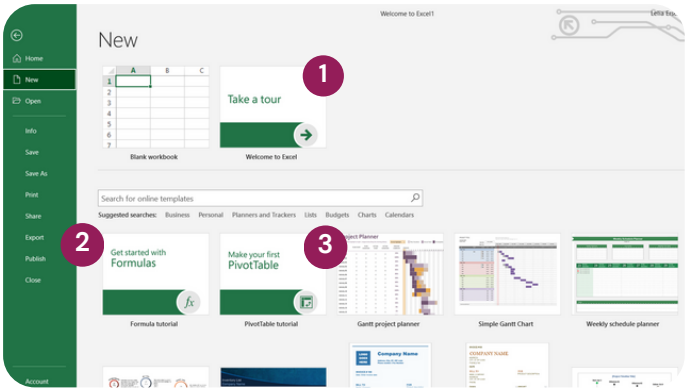
- **Enter data manually**: To enter data manually, simply click on the cell where you want to enter the data and begin typing. You can enter text, numbers, or formulas, depending on your needs. You can also use the arrow keys or the Tab key to move from cell to cell.
- **Import data from an external source**: To import data from an external source, click on the Data tab in the Ribbon and select the appropriate import option. Excel allows you to import data from a variety of sources, including text files, databases, and other Excel workbooks. Once you've selected the source of the data, follow the prompts to import it into Excel.

Step 4. Adding Formulas, Functions, Charts...
Excel offers a wide range of advanced features that can help you perform complex data analysis and visualization.

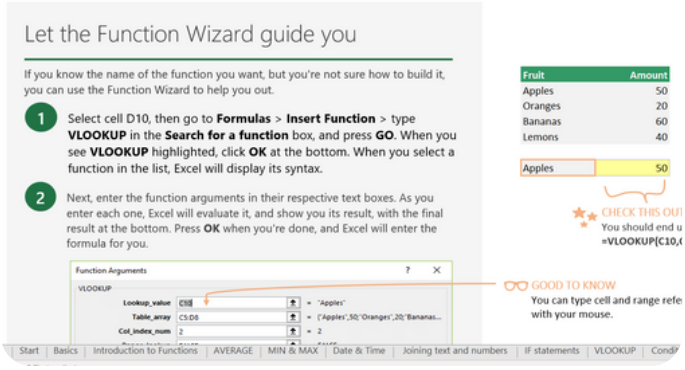
- **Formulas and Functions**: To add a formula or function to your worksheet, simply click on the cell where you want the result to appear and then enter the formula or function into the formula bar. Excel includes a wide range of built-in functions for performing calculations, and you can also create your own custom functions using Visual Basic for Applications (VBA).
- **Charts**: To create a chart, select the data you want to include in the chart and then click on the **Insert** tab in the Ribbon. From there, you can select the chart type you want to use and customize the chart to suit your needs.
- **PivotTables**: PivotTables are a powerful tool for summarizing and analyzing large amounts of data. To create a PivotTable, select the data you want to include in the table and then click on the **Insert** tab in the Ribbon. From there, you can select the PivotTable option and customize the table to suit your needs.

Excel In-built Tutorials

Excel includes a variety of in-built tutorials to help users learn how to use the software. These tutorials cover a range of topics, from basic tasks like entering and formatting data, to more advanced features like creating PivotTables and using formulas and functions. To access the Excel tutorials, simply click on the **File** tab in the Ribbon, and then select **New**. From there, you can choose from a variety of templates, including ones that feature built-in tutorials. You can also see these tutorials when first opening up Excel.



1. **Welcome to Excel**: This tutorial teaches you how to work with data. It is split into 10 parts: Add, Fill, Split, Transpose, Sort&Filter, Tables, Drop-downs, Analyze, Charts, and Pivot Tables.
2. **Formula Tutorial:** This tutorial walks you through some useful formulas. You will practice math functions, conditional formulas, working with the Function Wizard, and more!
3. **Pivot Table Tutorial**: Here you can learn how to create and use PivotTables in Excel. You will know how to group data, customize your table, and include more advanced functionality.



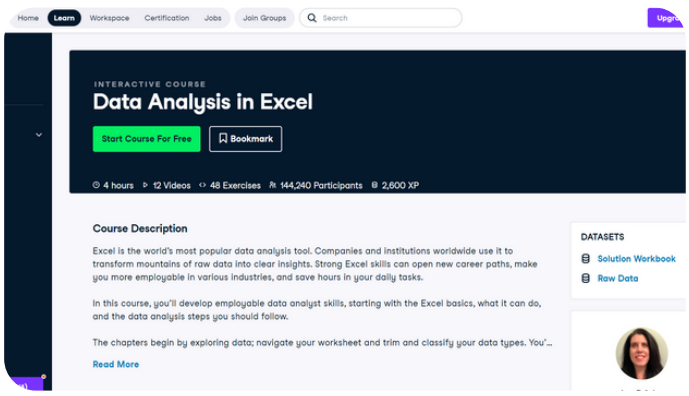
Taking your knowledge further

Here you will find additional resources to help you learn Excel.

Techionista provided courses

To help you learn the hard skills needed as a Microsoft data professional, we will use the tools listed below.

DataCamp



DataCamp is an interactive learning platform for data science. Through DataCamp, you can learn programming languages like Python and SQL through over 100 expert-taught courses. With its in-browser coding exercises, hands-on projects, and gamification features, DataCamp is the favorite learning platform of many Techionistas. After starting at the Techionista Academy, you will receive login details for DataCamp, giving you access to all their premium content during the track. This DataCamp module will help you learn Excel.

- DataCamp: Data Analysis in Excel

Additional learning materials

Whether you're a beginner looking to get started with the basics or an experienced user seeking to master advanced techniques, there is something out there for everyone. In this section, we'll explore some of the most popular and useful resources for learning more about Excel.

- Microsoft provides a video series to help you with different Excel elements like charts or even formatting.
- This website provides a series of tutorials on everything Excel-related, from syntax, to functions, and even guided projects! Practice makes perfect so make sure to check them out.
- Speaking of practice, this website offers small tests for every function or functionality in Excel. Great way to test your knowledge! You can even make an account and aim for the leaderboard :)
- You can check out this website to review terminology on Excel, going from basic stuff to more in-depth information. Examples included!
- If you prefer video formats, check out this video to follow along tutorials for 6 mini projects in Excel!
- If you're feeling more ambitious, you can check out this video on how to build a dashboard in Excel! Data analysis has never been easier.

Questions & where to go for help

Here you will find more information about where to ask questions and find help.

Where to go with questions?

A part of becoming a data analyst, data engineer, or data scientist if having good problem solving skills. Throughout the track you may run into situations where you feel stumped and need help finding an answer. In order to practice great problem solving skills there are a few avenues of support we recommend trying before using the Question Form provided by Techionista. Here are the avenues available to you that can help you find answers to many problems:

Your favorite search engine
Google (or your favorite search engine) will be your best friend during this track! If you find yourself stuck, the possibility to finding your answer online is high and we always recommend starting there. You would also be surprised by how many data experts use the internet to search for answers in a daily basis!

Your fellow Techionistas
If you still can't find the answer you are looking for on the internet or via one of the learning materials provided check with your study group or the other members in your cohort! Chances are someone may have the answer to your question or there are other people in the group who also are wondering the same thing! You can work together to share knowledge and find answers, which are also important skills to have: teamwork and collaboration!

Live training days
Come prepared for live training days with your hard skills questions! The best time and place to get your questions answering is by our great instructors. During live training days there is always enough time to answer your remaining questions!

Questions Form
If you are unable to find an answer to your question, please don't hesitate to ask the Techionista Team via the **Question Form**. The Question Form then is routed to the rest team member for your question and you will receive a response via a MS Teams message within two working days.