

BECOME A GREAT DATA ANALYST

Step by step guide by



Chandoo.org

BECOME AWESOME IN EXCEL



The PCSQT

To be a great data analyst, you need to be strong in the PCSQT skillset. These are,

- P for Data Preparation
- C for Number Crunching
- S for Storytelling
- Q for Asking Questions
- T for Technology

In this handy guide, I am giving you important **technical** resources for each of the first three areas (PCS).

Data Preparation

Good data leads to great analysis. Unfortunately, in most business situations, the data quality is not great. The key data preparation skills you need are,



- Knowledge of various data sources
- Automated data extraction
- Merging / combining data
- Data transformations (shape, size, or level)
- Cleaning up data
- Dealing with missing values, errors

Data preparation resources

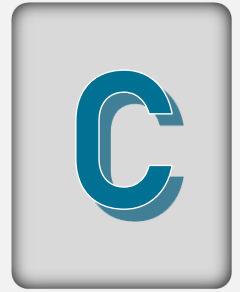
- **Power Query:** This feature is available in Excel and Power BI. You can use it to connect to any data sources (text files, databases, cloud platforms, APIs etc.), fetch data, filter & transform it and apply data cleaning steps based on business rules.
 - **How to use Power Query** - [Article](#) & [Video](#)
- **SQL:** Structured Query Language is a commonly used technology for data preparation. You can use SQL to get data from a single table or combine (join) data from multiple tables based on complex criteria.
 - **How to use SQL** – [Tutorial 1](#) & [Tutorial 2](#)
- **Excel:** Many times, you may end up with data in Excel spreadsheets that is not in ideal shape or format. Excel has many built-in features to quickly clean your data.
 - **Excel data cleaning** – [Video](#) & [Flash fill](#)

Want a quick win? Watch this...



Number Crunching

Once you have clean data, you can crunch it to learn valuable insights. The key number crunching skills are,



- Descriptive statistics: Mean, median, mode, quartiles, and distribution of your data
- Functional analysis: Industry specific techniques (ex: NPV / IRR for finance, Inventory Run Rate for manufacturing)
- Experimental / what-if analysis: checking which options are best for your business
- Ad-hoc analysis: trends, compositions, comparisons etc.

Number Crunching Resources:

You can crunch data with any tools. In this page, I am presenting Excel topics as Microsoft Excel is the most used platform for number crunching.

- **Excel Formulas:** Use Excel functions & formulas to quickly calculate any summary of your data. Here is my pick of [top 10 formulas for data analysis](#) & [video](#)
- **Pivot Tables:** Quickly and interactively analyze your data with Excel pivot tables. You can create business reports, find top 10 values, and compare items with Pivots.
 - **Getting started with Pivot tables** – [Article](#) & [Video](#)
 - **Advanced Pivot Table tricks** – [Article](#) & [Video Playlist](#)
- **Power Pivot:** Use Power Pivot with Excel and Power BI to analyze data. Create measures, KPIs and perform deep analysis of your datasets. [Here is a complete overview of Power Pivot.](#)



Storytelling

Now that your numbers are analyzed, it is time to present them in beautiful visual stories. The key storytelling skills are,

- Knowing which charts to make for your situation
- Understanding visual design principles
- Figuring out your audience needs
- Presentation & communication skills



Storytelling Resources:

Effective storytelling depends as much on you as it does on the technical tools. Here I have provided resources to make you a great communicator & storyteller.

- **Communication & Storytelling skills:**
 - Get inspiration from [popular TED talks](#)
 - [Storytelling with Data](#) – book by Cole N Knaflic
 - [Laws of UX: Using psychology to design better products](#) – book by Jon Yablonski
- **Excel skills:**
 - [How to pick right charts for your situation](#)
 - Storytelling example #1 – [Beautiful Budget vs. Actual Chart](#)
 - Example #2 – [6 Must know line charts for data analysis](#) & [video](#)
 - Example #3 – [Animated charts with Power Point](#)
- **Power Point:**
 - [Presentation Zen](#) – Recommended Book by Garr Reynolds
 - [Power Point Tutorials](#) – YouTube channel by One Skill

* The book links use my Amazon affiliate code.



Want a complete Data Analysis course?

I developed **Excel School program** to help data analysts become great in their work. This self-paced online class will teach you all the Excel concepts (Power Query, tables, formulas, pivot tables, charts & dashboards) in a step-by-step manner. In just 6 weeks, you can become an awesome data analyst.

[Click here to know more about the Excel School program.](#)

Introducing
Advanced Excel & Dashboards Training



by Chandoo

- ☑ Power Query
- ☑ Data model
- ☑ Interactive charting
- ☑ Adv. Formulas
- ☑ Analytics
- ☑ Dashboards
- ☑ Shortcuts & more...

Know more ▶

Testimonial on Excel School from Deramin (on Twitter)



Deramin @otdderamin · Mar 29

Slides website across the table.

Hey kid, do you want the best free article and guided reasonably priced paid class Excel resource that will very rapidly teach you to become a wizard that can do anything? Checkout Chandoo. Wonderful teacher.