Excel是一个表格软件用于统计数据信息，具有强大的数据检索能力，也能实现通过数据绘制可视化图表。而tableau是一个侧重于数据可视化的软件，通过输入数据或连接外部数据，高效地将数据以图表的形式展示出来。而python是一种编程语言，它可以设计一些自动化的脚本来对数据进行处理。

Excel和tableau都可以用于数据分析，excel主要通过检索数据的方式分析数据，但由于我们面对的是纯粹的数据，所以我们需要自己思考数据的一些关键点来进行分析，这需要我们对数据有充分的了解。

而tableau侧重于将数据进行可视化的展示，我们可以根据图形来发现数据的一些关键点，使用tableau进行数据可视化处理会更高效

Excel和tableau可以配合进行使用，我们使用excel对数据进行处理，之后链接excel和tableau来进行数据展示，来使我们的分析决策更高效。

Advantage：

Excel：

强大的数据检索能力，

强大的扩展性

庞大的用户群体，使其功能不断发展完善

Tableau：

便捷的数据可视化及数据分析

Python：

强大的自定义数据处理能力，能根据自己的需求对数据进行处理。

Disadvantage：

Excel：

较弱的可视化能力，需要借助插件

处理大数据时比较低效

Tableau：

对于数据的处理不够方便

不能直接展示复杂数据，得先对原始数据进行处理，以便于展示

Python：

需要进行一定的学习

由于没有图形界面，不具有可交互性，对数据展示样式的调整不够方便，

例子

Excel：适合用来展示一些简单的表格，比如一次销售情况汇报

Tableau：由于其数据展示具有良好的交互性，适合一些大型的数据可视化项目，比如全国的销售汇报，通过交互可以方便的查看各个地区的具体情况，从而尽快发现问题

Python：适合对大数据，以及一些未经处理的原始数据进行定制化的处理。比如我们获取了一份关于客户购物信息的大数据，我们设计一些规则来去除一些无效数据。并且可以对一些不规范的数据格式进行标准化的改变。

References：

[Tableau vs Python - Which One Is Better For Data Science? | MindBowser](https://www.mindbowser.com/python-vs-tableau/)

在这篇文章中作者主要对比了python和tableau在Data Handling，Visualization，Integrations，Ease Of Learning，Mobility等方面，最后得出结论，python和tableau结合工作时能取得更好的效果

[Tableau vs Excel: Which One Should You Use? | 365 Data Science](https://365datascience.com/tutorials/tableau-tutorials/tableau-vs-excel/)

在这篇文章中，作者比较了excel和tableau，他指出tableau在Data VisualizationCombination of Several Types of Charts，Time-saving和SQL Integration方面具有优势。而考虑到tableau可以结合excel软件包，以及tableau的其他几个优点，tableau具有优势

Excel is a tabular software used for statistical data information. It has strong data retrieval ability and can also draw visual charts through data. Tableau is a software focusing on data visualization, which can efficiently display data in the form of charts by inputting data or connecting external data. Python is a programming language, which can design some automated scripts to process data.

Both Excel and tableau can be used for data analysis. Excel mainly analyzes data by retrieving data. But because we are faced with pure data, we need to think about some key points of the data to analyze, which requires us to have a full understanding of the data.

Tableau focuses on visualizing the data. We can find some key points of the data according to the graph. It will be more efficient to use tableau to visualize the data

Excel and tableau can be used together. We use Excel to process data, and then link Excel and tableau to display data to make our analysis and decision-making more efficient.

Advantage：

E**xcel：**

Strong data retrieval capability,

Strong scalability

Huge user group, making its functions continuously developed and improved

**Tableau：**

Convenient data visualization and data analysis

Python：

Powerful user-defined data processing capability, able to process data according to their own needs.

Disadvantage：

Excel：

Weak visualization ability, requiring plug-ins

Processing big data is inefficient

Tableau：

The data processing is not convenient enough

Complex data cannot be displayed directly. The original data must be processed first to facilitate display

Python：

Need some learning

Because there is no graphical interface and no interactivity, it is not convenient to adjust the data display style,

example

Excel: suitable for displaying some simple tables, such as a sales report

Tableau: Because its data display has good interactivity, it is suitable for some large-scale data visualization projects, such as the national sales report. Through interaction, you can easily view the specific situation of each region, so as to find problems as soon as possible

Python: It is suitable for customized processing of big data and unprocessed raw data. For example, we obtained a big data about customers' shopping information, and we designed some rules to remove some invalid data. And some non-standard data formats can be standardized.

References：

[Tableau vs Python - Which One Is Better For Data Science? | MindBowser](https://www.mindbowser.com/python-vs-tableau/)

In this article, the author mainly compares python and tableau in data handling, visualization, integrations, ease of learning, mobility, etc. Finally, the author concludes that python and tableau can achieve better results when working together

[Tableau vs Excel: Which One Should You Use? | 365 Data Science](https://365datascience.com/tutorials/tableau-tutorials/tableau-vs-excel/)

In this article, the author compares excel and tableau, and points out that tableau has advantages in Data Visualization Combination of Sequal Types of Charts, Time saving and SQL Integration. Considering that tableau can combine excel software package and other advantages of tableau, tableau has advantages