Tutorial-1

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1. Tableau

Tableau is the swiftest-growing data visualization tool which helps you convert textual and numerical information to beautiful through interactive dashboards. It is the best way to change or transform the raw data into easily understandable data. Tableau is so popular, interactive, simple, fast and user-friendly and has a huge fan base in public and enterprise world. The great thing about tableau is that it doesn't need any technical or any kind of programming skills to operate. It has accumulated interest among the people across various sectors like different industries, business, and researchers.

Features of Tableau are:

- Real-time analysis
- Collaboration of data
- Data Blending

Advantages	Disadvantages
High Performance	Poor Versioning
Mobile-Friendly	No automatic refreshing of reports
Extensive customer resources	Need manual effort
Excellent mobile support	Not a comprehensive solution
Easy to upgrade	No version control
Low cost	Requires SQL knowledge

2. Python

Python is an interpreted high-level general-purpose programming language. Its design philosophy emphasizes code readability with its use of significant indentation. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

Advantages of Python:

- Easy to Read, Learn and Write
- Improved Productivity
- Interpreted Language
- Dynamically Typed
- Free and Open-Source
- Vast Libraries Support
- Portability

Disadvantages of Python:

- Slow Speed
- Not Memory Efficient
- Weak in Mobile Computing
- Database Access
- Runtime Errors

3. R

R is a programming language for statistical computing and graphics supported by the R Core Team and the R Foundation for Statistical Computing. Created by statisticians Ross Ihaka and Robert Gentleman, R is used among data miners and statisticians for data analysis and developing statistical software.

Advantages of R Programming:

- Open Source
- Exemplary Support for Data Wrangling
- The Array of Packages
- Quality Plotting and Graphing
- Highly Compatible
- Platform Independent
- Eye-Catching Reports
- Machine Learning Operations
- Statistics
- Continuously Growing

Disadvantages of R Programming:

- Weak Origin
- Data Handling
- Basic Security
- Complicated Language
- Lesser Speed
- Spread Across various Packages

4. Power BI

Power BI is an interactive data visualization software developed by Microsoft with primary focus on business intelligence. It is part of the Microsoft Power Platform.

Advantages of Power BI:

- Affordability
- Custom Visualizations
- Excel Integration
- Data Connectivity
- Prompt Updates
- Power BI Embedded
- Personal Gateway
- Data Accessibility
- Interactive Visualizations

Disadvantages of Power BI:

- Table Relationships
- Configuration of Visuals
- Crowded User Interface
- Rigid Formulas
- Handling Large Data Volumes
- Complex to Understand and Master

5. RapidMiner

RapidMiner is a data science software platform developed by the company of the same name that provides an integrated environment for data preparation, machine learning, deep learning, text mining, and predictive analytics.

Advantages of RapidMiner:

- Multiple deployment options based on your preference.
- Strong visualization.
- Accurate Preprocessing.
- Multiple interfaces.
- Java API available that can be used in programs.

Disadvantages of RapidMiner:

- It takes too much memory and so slows down your system.
- Less forums for support.
- Tough for new users.

6. SAS

SAS Institute is an American multinational developer of analytics software based in Cary, North Carolina. SAS develops and markets a suite of analytics software, which helps access, manage, analyze and report on data to aid in decision-making.

SAS Programming is a language used for analytical use. It is used for a very long time. All major companies use SAS as their official language for analysis. It's due to its features and edge points that SAS is a very preferred tool. It has a huge job market too.

Advantages of SAS:

- Easy to learn
- Ability to handle large database
- Easy to debug
- Tested algorithms
- SAS Customer support
- Data Security
- SAS GUI
- Nice Output
- Huge Job Prospects

Disadvantages of SAS:

- Cost
- SAS is not open source
- Lack of graphic representation
- Difficult Text Mining
- Difficult than R