**R-Programming**

R is an open-source programming language that is widely used as a statistical software and data analysis tool. R generally comes with the Command-line interface. R is available across widely used platforms like Windows, Linux, and macOS. Also, the R programming language is the latest cutting-edge tool.

**Why R Programming Language?**

* R programming is used as a leading tool for machine learning, statistics, and data analysis. Objects, functions, and packages can easily be created by R.
* It’s a platform-independent language. This means it can be applied to all operating system.
* It’s an open-source free language. That means anyone can install it in any organization without purchasing a license.
* R programming language is not only a statistic package but also allows us to integrate with other languages (C, C++). Thus, you can easily interact with many data sources and statistical packages.
* The R programming language has a vast community of users and it’s growing day by day.
* R is currently one of the most requested programming language in the Data Science job market that makes it the hottest trend nowadays.

**Advantages of R:**

* R is the most comprehensive statistical analysis package. As new technology and concepts often appear first in R.
* As R programming language is an open source. Thus, you can run R anywhere and at any time.
* R programming language is suitable for GNU/Linux and Windows operating system.
* R programming is cross-platform which runs on any operating systems.
* In R, everyone is welcome to provide new packages, bug fixes, and code enhancements.

**Disadvantages of R:**

* In the R programming language, the standard of some packages is less than perfect.
* Although, R commands give little pressure to memory management. So R programming language may consume all available memory.
* In R basically, nobody to complain if something doesn’t work.

**Applications of R:**

* We use R for Data Science. It gives us a broad variety of libraries related to statistics. It also provides the environment for statistical computing and design.
* R is used by many quantitative analysts as its programming tool. Thus, it helps in data importing and cleaning.
* R is the most prevalent language. So many data analysts and research programmers use it. Hence, it is used as a fundamental tool for finance.
* Tech giants like Google, Facebook, bing, Accenture, Wipro and many more using R nowadays.

**Few Commands of R**

1. Var=c(0,1,2,3)
2. Var=c(“Hi this is my 1st R code”)
3. x1=c(rnorm(n))
4. vect=c(x,y)
5. mat=cbind(x,y)
6. mat[4,2]
7. subset(dataset,logical)
8. rm(x)
9. attach(mat)
10. detach(mat)
11. replace(x, list, values)
12. round(x,n)
13. floor(x)
14. any(x)
15. max()
16. min()
17. mean()
18. cumsum(x)
19. cumprod(x)
20. rev(x)