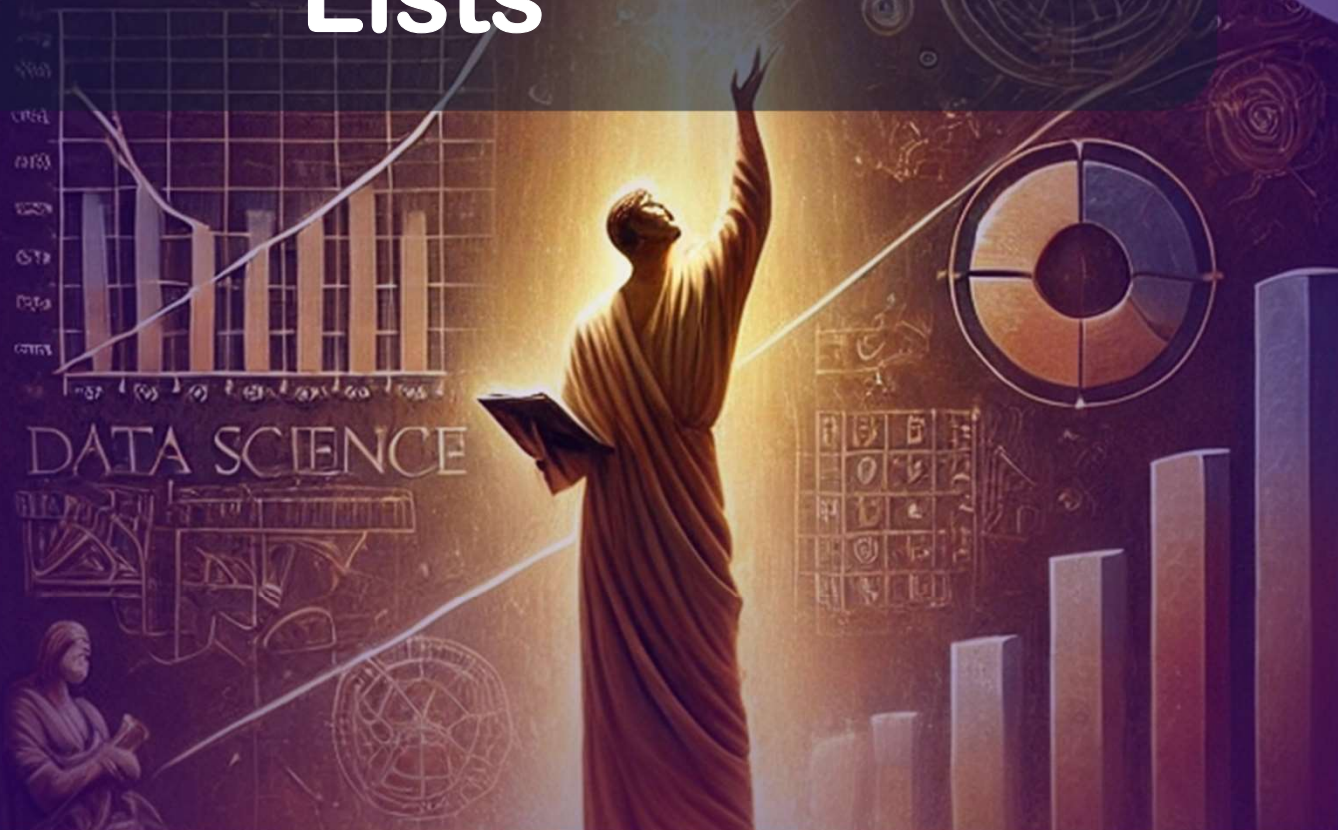# DATA STRUCTURES IN R
Lists

MASTER R PROGRAMMING

Lesson Goal

- Learn to create lists in R.

Create Lists in R

- A **list** is a data structure that allows you to store different data types, or even store other data structures.

- The basic data structures are:
    - Vectors
    - Lists
    - Matrices
    - Arrays
    - Data Frames

Create Lists in R

- Create a list using:

$$\texttt{list()}$$

Create Lists in R

```r
list(firstList, secondList, …)
```
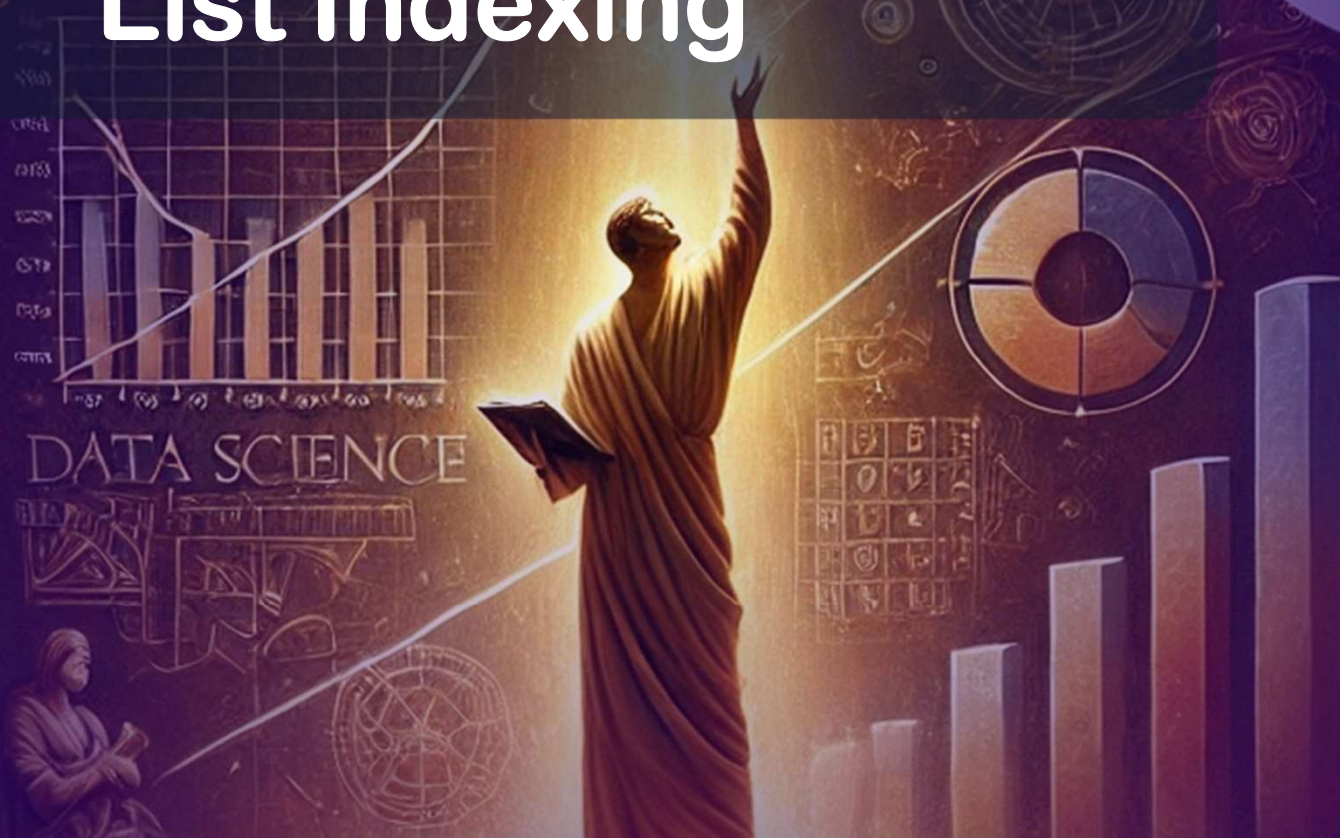
```
[[1]]
[1] firstList

[[2]]
[1] secondList

[[3]]
[1] …
```

DATA STRUCTURES IN R
List Indexing

MASTER R PROGRAMMING

Lesson Goal

- Learn to extract list items and elements in R.

List Indexing in R

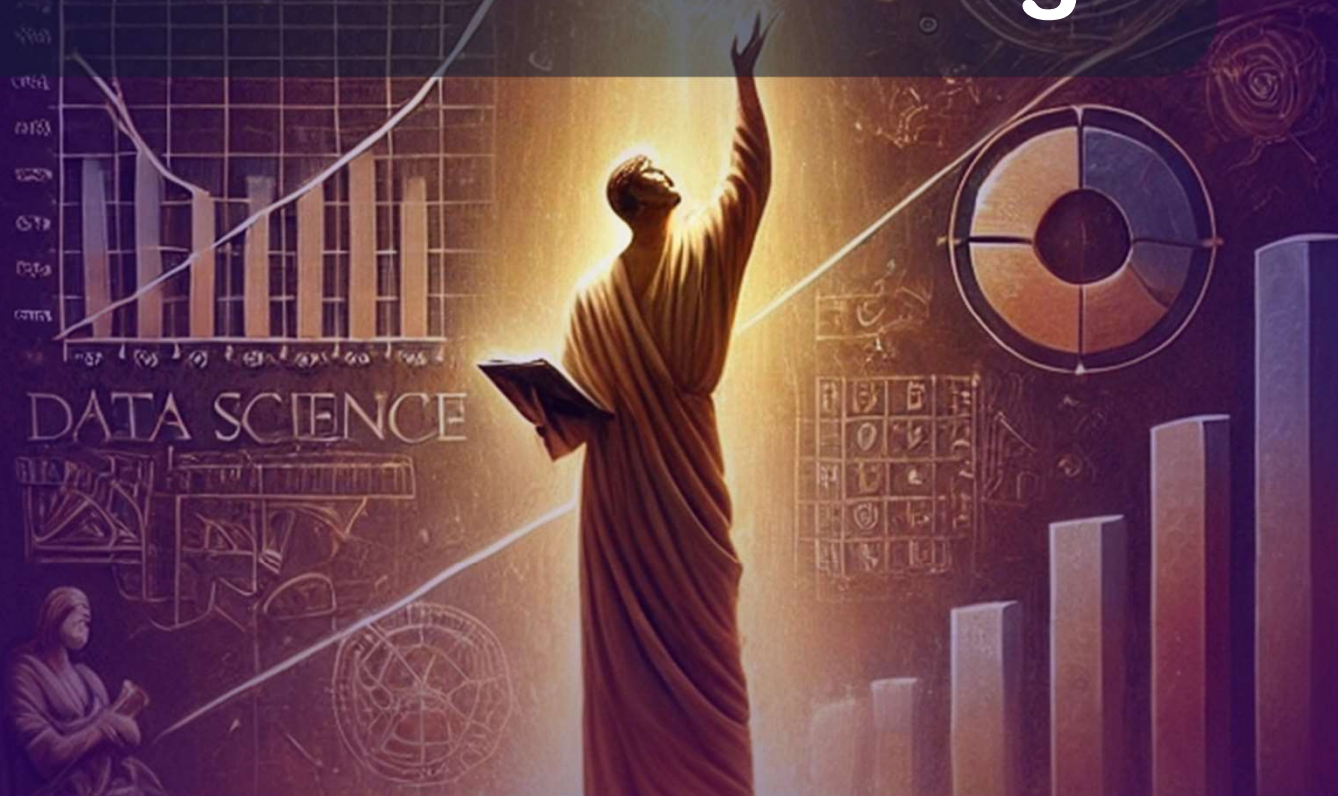- Extract elements from list using double square brackets `[[]]`:

$$\texttt{list\_name[[]]}$$

specify position of list item to extract

DATA STRUCTURES IN R
Named Lists and Indexing

DATA SCIENCE

Lesson Goal

- Learn to assign names to list items in R and perform indexing using these names.

Named Lists and Indexing in R

- Create a named list like:

```
list(
    name_1 = c(),
    name_2 = c(),
    ⋮
)
```