Hardware and Software requirement for Training.

Hardware Requirements:

- Windows/ Linux operating System (64-bit).
- 8 GB Ram machines
- Intel i5 and above processor.
- Minimum of 50 gb of hard disk space.
- Connectivity to the internet without any port /download restrictions.

Software Requirements:

R base package installation.

Installing R on Windows

- Visit the Comprehensive R Archive Network (CRAN) and select a mirror site; a list of CRAN mirrors appears at the upper left of the CRAN home page.

- Click on the link *Download R for Windows*, which appears near the top of the page; then click on *install R for the first time*, and subsequently on *Download R x.y.z for Windows* (where x.y.z is the current version of R). Once it is downloaded, double-click on the R installer. You may take all of the defaults, except the below mentioned one.

- Instead of installing R in the standard location, C:\Program Files\R\R-x.y.z, It is suggested to use C:\R\R-x.y.z. Again, x.y.z is the current version of R. This will allow you to install packages in the main R library without running R with administrator privileges and may avoid problems that sometimes occur when there are spaces in paths.

Installing R on Linux Systems

- Visit the Comprehensive R Archive Network (CRAN) and select a mirror site near you; a list of CRAN mirrors appears at the upper left of the CRAN home page. Click on the link *Download R for Linux*, which appears near the top of the

page. R is available for several Linux distributions (Debian, RedHat, SUSE, and Ubuntu); select your distribution, and proceed as directed.

● If you have a Linux or Unix system that's not compatible with one of these distributions, you will have to compile R from source code; the procedure for doing so is described in the R FAQ (frequently asked questions) list.

R Studio installation

Installing RStudio

● Go to the RStudio download page, select the free version of RStudio Desktop, press the correspond Download button, and download the appropriate installer for your operating system (Windows, macOS, or Linux). Visit the RStudio home page for more information about RStudio.

● Once it is downloaded, run the RStudio installer and take all the defaults: In Windows, double-click on the RStudio installer to start the installation; in macOS, double-click on the downloaded RStudio disk-image file, and drag the *RStudio* icon to the *Applications* folder.

● When you first run RStudio, it should detect your R installation and start the R console. To configure RStudio to your taste, select *Tools > Global Options* (Windows) or *RStudio > Preferences* (macOS) from the RStudio menus.

● If you encounter difficulties, consult the RStudio troubleshooting guide.

Python Installation

Installation for Windows OS

● Download Windows x86 executable installer

Installation for Linux OS

● Download Gzipped source tarball

Keras & Tensorflow Installation

● Execute the below code in R Studio in the console.

```r
# To setup keras with tensorflow in R


install.packages("devtools")
devtools::install_github("rstudio/keras")
library(keras)


# install only one of the below two lines


install_tensorflow() # if needed with cpu support
install_tensorflow(gpu=TRUE) # if needed with gpu support and gpu is
available on the machine
```