R PROGRAMMING FOR REMOTE SENSING AND GIS

BASIC CODES FOR R PROGRAMMING

# for install packages

Install.packages(package name)

#for run a particular package

library(package name)

#for set working directory

setwd(choose dir())

That open a window from where you have to select the folder for your working

#for see working directory

getwd()

# for assign a file into r language

A<- (choose file ())

From the window you have to select the file you want to open

LAYER STACK IN R LANGUAGE

library(raster)

#load a single band

b2 <- raster(choosefile())

b3 <- raster(choosefile())

b4 <- raster(choosefile())

b5 <- raster(choosefile())

layerstack <- stack(b2,b3,b4,b5)

IMAGE INFORMATION AND STATISTICS

# coordinate reference system (CRS)

crs(b2)

# Number of rows, columns, or cells

ncell(b2)

dim(b2)

# spatial resolution

res(b2)

# Number of bands

nlayers(b2)

VIEW IMAGE

plotRGB(layerstack, r = 1, g = 2, b = 3, axes = TRUE, stretch = "lin", main = "name")

NDVI

Ndvi <- (b5-b3)/(b5+b3)

SUBSET

A <- extent(xmin,xmax,ymin,ymax)

Subset <- crop(layerstack,A)

SAVE RASTER DATA

Writeraster(subset,”subset.tif”,datatype=”FLT45”,format=”GTiff”,overwrite=TRUE)

ADD EXCEL FILE AND REGRESSION

#first you have to convert excel into csv file

Excel <-read.csv(choosefile())

X<-Excel$column1

Y<-Excel$column2

plot(x,y)

cor(x,y)

line(x,y)

abline(x,y)