Data analytics and Machine learning stages in one page (R Programming)

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K Nearest Neighbour – Model	
>data(iris)	**Data Analysis and visualization**
>str(iris)	
> names(iris)	
> class(iris)	
>table(iris$Species)	
>head(iris)	
> summary(iris)	
> table(iris$Species) > pie(table(iris$Species), main = "Pie Chart of the Iris data set Species", col = c("orange1", "chocolate", "coral"), radius = 1)	
> pairs(iris[,1:4])	
>hist(iris$Sepal.Width)	
> ggplot(iris, aes(x = Sepal.Length, y = Sepal.Width)) + geom_point()	
>set.seed(9850)	**Preprocessing**
>gp<- runif(nrow(iris))	
>iris<- iris[order(gp),]	
>str(iris)	
>head(iris)	
>head (iris, 10)	
>str(iris)	
>summary (iris[,c(1,2,3,4)])	
>normalize<- function(x){return((x-min(x))/ (max(x) - min(x)))}	
>normalize(c(1,2,3,4,5))	
>iris_n<-as.data.frame(lapply(iris[,c(1,2,3,4)], normalize))	
>summary(iris_n)	
>str(iris)	
>iris_train <- iris_n[1:129,]	**Machine Learning Model KNN Model Training and Testing**
>iris_test<-iris_n[130:150,]	
>iris_train_target<- iris[1:129,5]	
>iris_test_target<- iris[130:150,5]	
>require(class)	
>sqrt(150)	
>m1<- knn(train=iris_train, test=iris_test, cl=iris_train_target, k=13)	
>table(iris_test_target, m1)	