getwd()

setwd("/Users/devottambhattacharya/Documents/IPL data/IPL Batsmen")

data\_new <- read.csv("Batsmen\_final\_dump\_wpts\_clean.csv")

data\_new

data\_2018 <- read.csv("Batsmen\_final\_dump\_wpts\_2018.csv")

data\_2018

data\_new[!complete.cases(data\_new),]

data\_2018[!complete.cases(data\_2018),]

data\_new <- data\_new[c(2,15)]

head(data\_new)

data\_2018 <- data\_2018[c(3,15)]

head(data\_2018)

data\_bat <- rbind(data\_new, data\_2018)

head(data\_bat)

colnames(data\_bat)[2] <- "points"

data\_test <- data\_bat

head(data\_test)

str(data\_test)

par(mfrow=c(1,1))

#Alphabetical order

Names\_bat <-data.frame(levels(data\_bat$BATSMEN))

Names\_bat

Alphabetical\_names\_batsmen <- with(Names\_bat, Names\_bat[order(Names\_bat$levels.data\_test.BATSMEN.),])

Alphabetical\_names\_batsmen <- data.frame(Alphabetical\_names\_batsmen)

Alphabetical\_names\_batsmen

#In descending order of points

data\_descending\_points <- data\_1[order(-data\_1$points),]

data\_descending\_points

str(data$points)

Alphabetical\_names\_batsmen

#clean data : data\_test

#FUNCTIONS

col\_add <- function(Name, row){

Name <- cbind(data.frame(seq(1,row,1)), Name)

colnames(Name)[1] <- "seq"

return(as.data.frame(Name))

}

plot\_add <- function(Name){

ggplot(data = Name, aes(x=seq, y= points)) + geom\_point() + geom\_line()+stat\_smooth()

}

?geom\_smooth

Predict <- function(Name){

Point\_forecasts <- HoltWinters(Name$points,beta = F, gamma = F)

Point\_forecasts

Point\_forecasts\_value <- forecast(Point\_forecasts, h=1)

plot(Point\_forecasts\_value)

Point\_forecasts\_value

}

HoltWinters

Fitted <- function(name){

plot.ts(name$points)

lines(HoltWinters(name$points, gamma=F)$fitted[,2], col = "red")

}

Test\_Train <- function(name, end, start, end\_2){

name.train <- window(name, end=end)

return (name.train)

name.test <- window(Yuvraj, start=start, end=end\_2)

return(name.test)

}

#Virat Kohli

Kohli <- data\_bat[data\_bat$BATSMEN=="VKohli",]

Kohli

#Kohli\_c <- data\_1[data\_1$BATSMEN=="VKohli(c)",]

#Kohli <- rbind(Kohli\_c, Kohli)

Kohli <- col\_add(Kohli, 95)

plot\_add(Kohli)

Fitted(Kohli)

Predict(Kohli)

#Chris Gayle

Gayle <- data\_test[data\_test$BATSMEN=="CHGayle",]

Gayle

head(Gayle)

Gayle <- col\_add(Gayle, 74)

plot\_add(Gayle)

Predict(Gayle)

Fitted(Gayle)

#Suresh Raina

Raina\_c <- data\_test[data\_test$BATSMEN=="SKRaina",]

Raina\_c <- col\_add(Raina\_c, 96)

plot\_add(Raina\_c)

Predict(Raina\_c)

Fitted(Raina\_c)

#Yuvraj Singh

Yuvraj <- data\_test[data\_test$BATSMEN=="YuvrajSingh",]

Yuvraj <- col\_add(Yuvraj, 65)

Yuvraj

#Yuvraj <- ts(Yuvraj)

Yuvraj.train <- window(Yuvraj, end=62)

Yuvraj.train

Yuvraj.test <- window(Yuvraj, start=63, end=65)

plot\_add(Yuvraj)

Predict(Yuvraj)

autoplot(Yuvraj)

plot\_add(Yuvraj)

HW\_forecast <- HoltWinters(Yuvraj.train, gamma = F)

HW\_forecast

Yuvraj\_fcast <- forecast(HW\_forecast, h=3)

Yuvraj\_fcast

accuracy( Yuvraj\_fcast, Yuvraj.test)

HW\_forecast\_expo <- HoltWinters(Yuvraj.train,beta = F, gamma = F)

Yuvraj\_fcast\_ex <- forecast(HW\_forecast\_expo, h=3)

accuracy(Yuvraj\_fcast\_ex, Yuvraj.test)

Fitted(Yuvraj)

#Ab De Villiers

ABDe <- data\_bat[data\_bat$BATSMEN=="ABdeVilliers",]

Alphabetical\_names\_batsmen

#ABDE\_1 <- data\_1[data\_1$BATSMEN=="ABdeVilliers",]

#ABDe <- rbind(ABDe, ABDE\_1)

ABDe <- col\_add(ABDe, 85)

plot\_add(ABDe)

Predict(ABDe)

Fitted(ABDe)

#MandeepSingh

Mandeep\_Singh <- data\_bat[data\_bat$BATSMEN=="MandeepSingh",]

Mandeep\_Singh <- col\_add(Mandeep\_Singh, 60)

plot\_add(Mandeep\_Singh)

Predict(Mandeep\_Singh)

Fitted(Mandeep\_Singh)

#Ambati Rayudu

A\_Rayudu <- data\_test[data\_test$BATSMEN=="ATRayudu",]

A\_Rayudu <- col\_add(A\_Rayudu, 77)

plot\_add(A\_Rayudu)

Predict(A\_Rayudu)

#Sam Billings

Billings <- data\_test[data\_test$BATSMEN=="SWBillings",]

Billings <- col\_add(Billings, 13)

plot\_add(Billings)

Predict(Billings)

Alphabetical\_names\_batsmen

#Brendon McCulum

McCullum <- data\_bat[data\_bat$BATSMEN=="BBMcCullum",]

McCullum <- col\_add(McCullum, 69)

plot\_add(McCullum)

Predict(McCullum)

#Murali Vijay

Vijay <- data\_test[data\_test$BATSMEN=="MVijay",]

Vijay <- col\_add(Vijay, 61)

plot\_add(Vijay)

Predict(Vijay)

#Uthappa

Uthappa <- data\_test[data\_test$BATSMEN=="RVUthappa",]

Uthappa <- col\_add(Uthappa,95)

plot\_add(Uthappa)

Predict(Uthappa)

#Chris Lynn

Alphabetical\_names\_batsmen

Lynn <- data\_test[data\_test$BATSMEN=="CALynn",]

Lynn <- col\_add(Lynn, 18)

plot\_add(Lynn)

Predict(Lynn)

#G Gambhir

Gambhir <- data\_test[data\_test$BATSMEN=="GGambhir",]

Gambhir <- col\_add(Gambhir, 88)

plot\_add(Gambhir)

Predict(Gambhir)

#Shreyas iyer

Shreyas <- data\_test[data\_test$BATSMEN=="SSIyer",]

Shreyas <- col\_add(Shreyas, 37)

plot\_add(Shreyas)

Predict(Shreyas)

#Nitish Rana

Rana <- data\_test[data\_test$BATSMEN=="NRana",]

Rana <- col\_add(Rana, 21)

plot\_add(Rana)

Predict(Rana)

#Shubham Gill

Gill <- data\_test[data\_test$BATSMEN=="ShubmanGill",]

#Jason Roy

Jason <- data\_test[data\_test$BATSMEN=="JJRoy",]

#Dinesh Karthik

Karthik <- data\_test[data\_test$BATSMEN=="KDKarthik",]

Karthik

Karthik <- col\_add(Karthik, 89)

plot\_add(Karthik)

Predict(Karthik)

#Rishabh Pant

Pant <- data\_test[data\_test$BATSMEN=="RRPant",]

Pant <- col\_add(Pant, 30)

plot\_add(Pant)

Predict(Pant)

#Naman Ojha

Ojha <- data\_test[data\_test$BATSMEN=="NVOjha",]

Ojha <- col\_add(Ojha, 55)

plot\_add(Ojha)

Predict(Ojha)

Fitted(Ojha)

#Andre Russell

Alphabetical\_names\_batsmen

Russel\_bat <- data\_test[data\_test$BATSMEN=="ADRussell",]

Russel\_bat <- col\_add(Russel\_bat,29)

plot\_add(Russel\_bat)

Predict(Russel\_bat)

Fitted(Russel\_bat)

#Sunil Narine

Narine\_bat <- data\_test[data\_test$BATSMEN=="SPNarine",]

Narine\_bat <- col\_add(Narine\_bat, 35)

plot\_add(Narine\_bat)

Predict(Narine\_bat)

Fitted(Narine\_bat)

#Glen Maxwell

Maxwell\_bat <- data\_test[data\_test$BATSMEN=="GJMaxwell",]

Maxwell\_bat <- col\_add(Maxwell\_bat, 58)

plot\_add(Maxwell\_bat)

Predict(Maxwell\_bat)

Fitted(Maxwell\_bat)

#Daniel Christian

DTChristian\_bat <- data\_test[data\_test$BATSMEN=="DTChristian",]

DTChristian\_bat <- col\_add(DTChristian\_bat, 18)

plot\_add(DTChristian\_bat)

Predict(DTChristian\_bat)

Fitted(DTChristian\_bat)

#Chris Morris

Alphabetical\_names\_batsmen

Morris\_bat <- data\_test[data\_test$BATSMEN=="CHMorris",]

Morris\_bat <- col\_add(Morris\_bat, 31)

plot\_add(Morris\_bat)

Predict(Morris\_bat)

Fitted(Morris\_bat)

#MS Dhoni

Dhoni <- data\_test[data\_test$BATSMEN=="MSDhoni",]

Dhoni <- col\_add(Dhoni, 91)

plot\_add(Dhoni)

Predict(Dhoni)

Fitted(Dhoni)

#QdeKock

QdeKock <- data\_bat[data\_bat$BATSMEN=="QdeKock",]

QdeKock <- col\_add(QdeKock, 34)

plot\_add(QdeKock)

Predict(QdeKock)

Fitted(QdeKock)

#Warner

Warner <- data\_test[data\_test$BATSMEN=="DAWarner",]

Warner <- col\_add(Warner, 80)

plot\_add(Warner)

Predict(Warner)

Fitted(Warner)

#WP Saha

Alphabetical\_names\_batsmen

Saha <- data\_bat[data\_bat$BATSMEN=="WPSaha",]

Saha <- col\_add(Saha, 61)

plot\_add(Saha)

Predict(Saha)

#Parthiv Patel

P\_Patel <- data\_bat[data\_bat$BATSMEN=="PAPatel",]

P\_Patel <- col\_add(P\_Patel, 75)

plot\_add(P\_Patel)

Predict(P\_Patel)

#Manish Pandey

M\_Pandey <- data\_bat[data\_bat$BATSMEN=="MKPandey",]

M\_Pandey <- col\_add(M\_Pandey, 74)

plot\_add(M\_Pandey)

Predict(M\_Pandey)

#Shikhar Dhawan

Dhawan <- data\_bat[data\_bat$BATSMEN=="SDhawan",]

Dhawan <- col\_add(Dhawan, 89)

plot\_add(Dhawan)

Predict(Dhawan)

#Williamson

Williamson <- data\_bat[data\_bat$BATSMEN=="KSWilliamson",]

Williamson <- col\_add(Williamson, 24)

plot\_add(Williamson)

Predict(Williamson)

#Alex Hales

Hales <- data\_bat[data\_bat$BATSMEN=="ADHales",]

Hales <- col\_add(Hales, 2)

plot\_add(Hales)

Predict(Hales)

#M Vohra

Vohra <- data\_bat[data\_bat$BATSMEN=="MVohra",]

Vohra <- col\_add(Vohra, 44)

plot\_add(Vohra)

Predict(Vohra)

#Hasan

Shakib\_bat <- data\_bat[data\_bat$BATSMEN=="ShakibAlHasan",]

Alphabetical\_names\_batsmen

Shakib\_bat <- col\_add(Shakib\_bat, 34)

plot\_add(Shakib\_bat)

Predict(Shakib\_bat)

#YK Pathan

YK\_Pathan\_bat <- data\_bat[data\_bat$BATSMEN=="YKPathan",]

YK\_Pathan\_bat <- col\_add(YK\_Pathan\_bat, 84)

plot\_add(YK\_Pathan\_bat)

Predict(YK\_Pathan\_bat)

#Grandhomme

Grandhomme\_bat <- data\_bat[data\_bat$BATSMEN=="CdeGrandhomme",]

Grandhomme\_bat <- col\_add(Grandhomme\_bat, 13)

plot\_add(Grandhomme\_bat)

Predict(Grandhomme\_bat)