suppressPackageStartupMessages(library("optparse"))

suppressPackageStartupMessages(library("stats"))

usage = "The prog is used to display the distribution of TSS,TTS,startcondon,stopcodon,and there is a break between TTS and TSS. But this prog can be used to display any multi lines.

option\_list <- list(

make\_option(c("-f", "--file"),action = "store",type = "character",

help = "The Input file"),

make\_option(c("-s", "--samplename"),action = "store",type = "character",

help = "The Input sample name"),

make\_option(c("-t", "--title"),action = "store",type = "character",

help = "The title of outimage"),

make\_option(c("-n", "--filename"),action = "store",type = "character",

help = "The name of outimage"),

make\_option(c("-l","--length"),action = "store",type = "integer",default = "2",

help = "The length bewteen start to end"),

make\_option(c("-o", "--outdir"),action = "store",type = "character",default = "./",

help = "The outdir")

)

# parser <- OptionParser(usage = "%prog [option] file",option\_list =option)

# arguments <- parse\_args(parser,positional\_arguments = 2)

opt <- parse\_args(OptionParser(option\_list = option\_list,usage=usage))

#######必须有positional\_arguments = TRUE

if(!is.character(opt$filename)){

opt$filename = gsub(" ","\_",opt$title)

}

setwd(opt$outdir)

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library(ggplot2)

library(reshape2)

library(plotrix)

library(methods)

library(RColorBrewer)

library("ggsci")

library("ggthemes")

###################################################################################

# colour <- c('#85A2EF','#D285EF','#A2EF85','#4682B4','#A0522D','#87CEEB','#6B8E23','#6A5ACD','#E59B95','#EFD285','#B4B643','#2E9AFE','#A1DDBB','#FF8C00')

colour1 <- brewer.pal(8,"Dark2")

colour2 <- brewer.pal(9,"Set1")

colour3 <- brewer.pal(12,"Paired")

colour<- c(colour1,colour2,colour3)

# colour <-c(colour3[2:12],colour2[8],colour1[4],colour1[7],colour1[8])

# colour <-c("#3C5488CC","#E64B35FF","#4DBBD5FF","#00A087FF",colour1[2],colour1[6:8])

###################################################################################

###

file <- strsplit(opt$file,",")[[1]]

samplename <- strsplit(opt$samplename,",")[[1]]

data <- c()

for(i in 1:length(file)){

samplename[i] <- gsub('\_distance2startcodon','',samplename[i])

samplename[i] <- gsub('\_distance2stopcodon','',samplename[i])

samplename[i] <- gsub('\_distance2tts','',samplename[i])

samplename[i] <- gsub('\_distance2tss','',samplename[i])

text <- read.table(file = file[i],header = TRUE)

# if(grepl("stopcodon",file[i]) || grepl("tts",file[i])){

# # if(grepl("stopcodon",samplename[i]) || grepl("tts",samplename[i])){

# # if(samplename[i] == "stopcodon" || samplename[i] == "tts"){

# text[,1] <- text[,1]+opt$length\*max(text[,1])+500

# }

if(grepl("\_re\_",file[i])){

# if(grepl("stopcodon",samplename[i]) || grepl("tts",samplename[i])){

# if(samplename[i] == "stopcodon" || samplename[i] == "tts"){

text[,2] <- 0-text[,2]

}

text[,3] <- samplename[i]

text[,4] <- colour[i]

data <- rbind(data,text)

}

Max <- max(data[,2])

samplename

colname <- colnames(text)

colname[1] <- sub('X.','',colname[1])

title <- gsub('\_',' ',opt$title)

#####################################################

ablife\_theme\_line <- function(base\_size = 12){

library(grid) ####for using unit function

theme(

plot.title = element\_text(size=12,lineheight = 10,colour="#000000",vjust = 1),

axis.title.x = element\_text(size=12,colour = "#000000",vjust = 0.5),

axis.title.y = element\_text(size=12,colour = "#000000",vjust = 1),

axis.text.x = element\_text(size = 12,colour = "#000000"),

axis.text.y = element\_text(size = 12 ,colour = "#000000"),

axis.ticks.length = unit(0.1,"cm"),

axis.ticks = element\_line(colour = "#000000"),

# legend.title = element\_text(size = 9),

legend.title = element\_blank(),

legend.text = element\_text(size = 9),

legend.key.size = unit(0.5,"cm"),

panel.background = element\_rect(colour = "black")

# panel.background = element\_rect(fill = "white",colour = NA),

# # panel.border = element\_rect(size = 1,colour = "#8B8B8B",fill =NA),

# # panel.grid.major = element\_line(size=0.1,colour = "#BFBFBF"),

# # panel.grid.minor = element\_line(size=0.1,colour = "#7F7F7F")

# panel.border = element\_rect(size = 1,colour = "#000000",fill =NA),

# panel.grid.major.x = element\_line(size=0.3,colour = "#000000"),

# panel.grid.major.y = element\_line(size=0.1,colour = "#909090",linetype = "dotted"),

# panel.grid.minor = element\_line(size=0.1,colour = "#7F7F7F")

)

}

theme\_paper <- theme(

# panel.border = element\_rect(fill = NA,colour = "black"),

panel.grid.major = element\_line(size = 0.2,linetype = "dashed"),

# panel.grid.major = element\_blank(),

panel.grid.minor = element\_line(colour = "grey90",size = 0.2,linetype = "dashed"),

# axis.text.x= element\_text(vjust = 1,hjust = 1, angle = 45),

# legend.position = "top",

# legend.direction = "horizontal",

legend.key = element\_rect(fill = 'white', color = 'white'),

legend.key.size = unit(0.5, "cm"),

# legend.position = c(0.82, 0.68),

# legend.position = "top",

# legend.direction = "horizontal",

legend.title = element\_blank(),

# panel.grid.minor = element\_blank(),

# plot.margin = margin(1,1,1,1,unit="cm"),

legend.text = element\_text(size = 11),

axis.title = element\_text(size = 12, face = "bold"),

plot.title = element\_text(size = 12, face = "bold"),

axis.text = element\_text(size = 12, colour = "black")

)

# outname = gsub(" ","\_",Image\_name)

# png(file=paste(opt$filename,".png",sep=''),pointsize=40,width=1000,height=600)

ggplot(data)+ ####

geom\_line(aes(x = data[,1],y=data[,2],stat = "identity",group = data[,4],colour = data[,3]),size =1,position = "identity")+ labs(title = "",x="",y="")+

# ablife\_theme\_line()+

# theme(

# # legend.position = c(0.8, 0.78), #adjust for needing

# # legend.position = "right",

# legend.background = element\_blank(),

# legend.key = element\_blank()

# # legend.direction = "horizontal"

# )+

# scale\_x\_continuous(breaks = c(-1000,0,1000,1500,2500,3500),labels = c(-1000,"0\n(5')",1000,-1000,"0\n(3')",1000))+ # scale\_y\_continuous(limits=c(min(data[,2]),Max+10))+

# scale\_colour\_hue(name=filename) ###

# scale\_x\_continuous(trans="log2")+

# scale\_colour\_nejm()+

# scale\_color\_manual(values=c('#85A2EF','#D285EF','#A2EF85','#4682B4','#A0522D','#87CEEB','#6B8E23','#6A5ACD','#E59B95','#EFD285','#B4B643','#2E9AFE','#A1DDBB','#FF8C00'))+

# scale\_colour\_manual("Type",values = colour[1:length(samplename)])+ theme\_bw() + theme\_paper

ggsave(file = paste(opt$filename,".pdf",sep=''), width = 180,height = 90,dpi = 450,units = "mm")

ggsave(file = paste(opt$filename,".png",sep=''), width = 180,height = 90,dpi = 450,units = "mm")