

A Simple Case Using GGplot2

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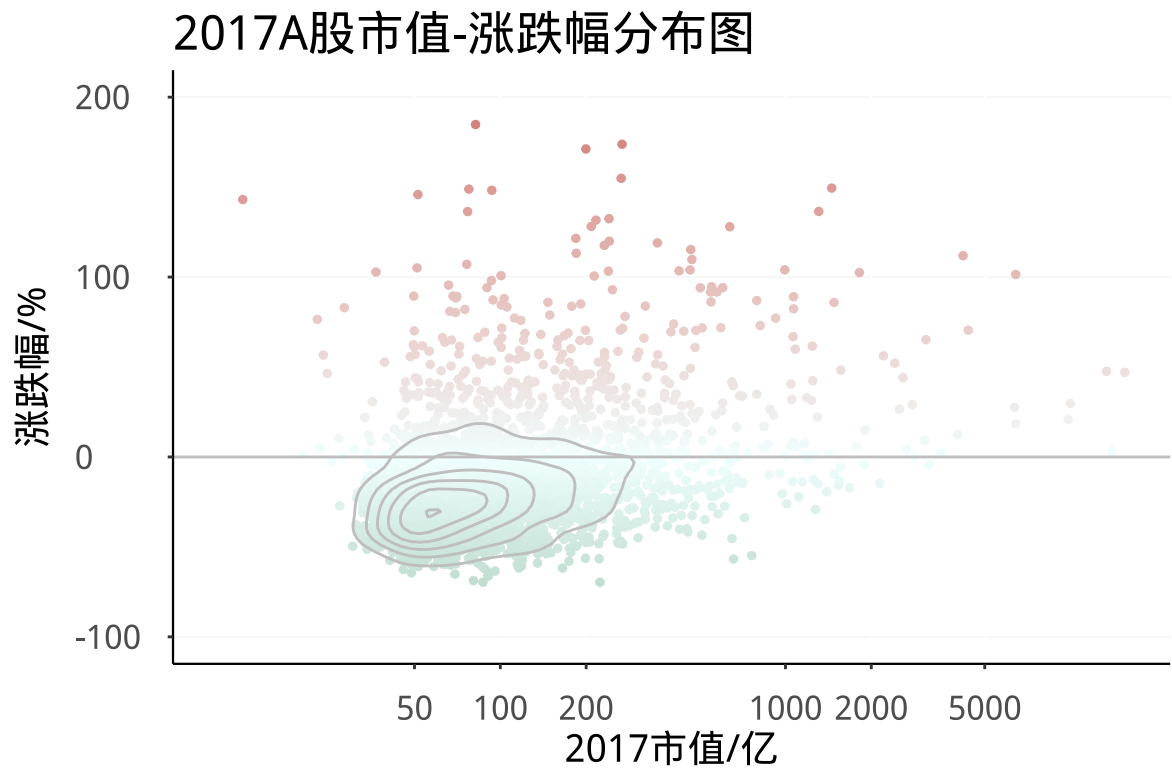
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读取数据

自定义主题

散点图

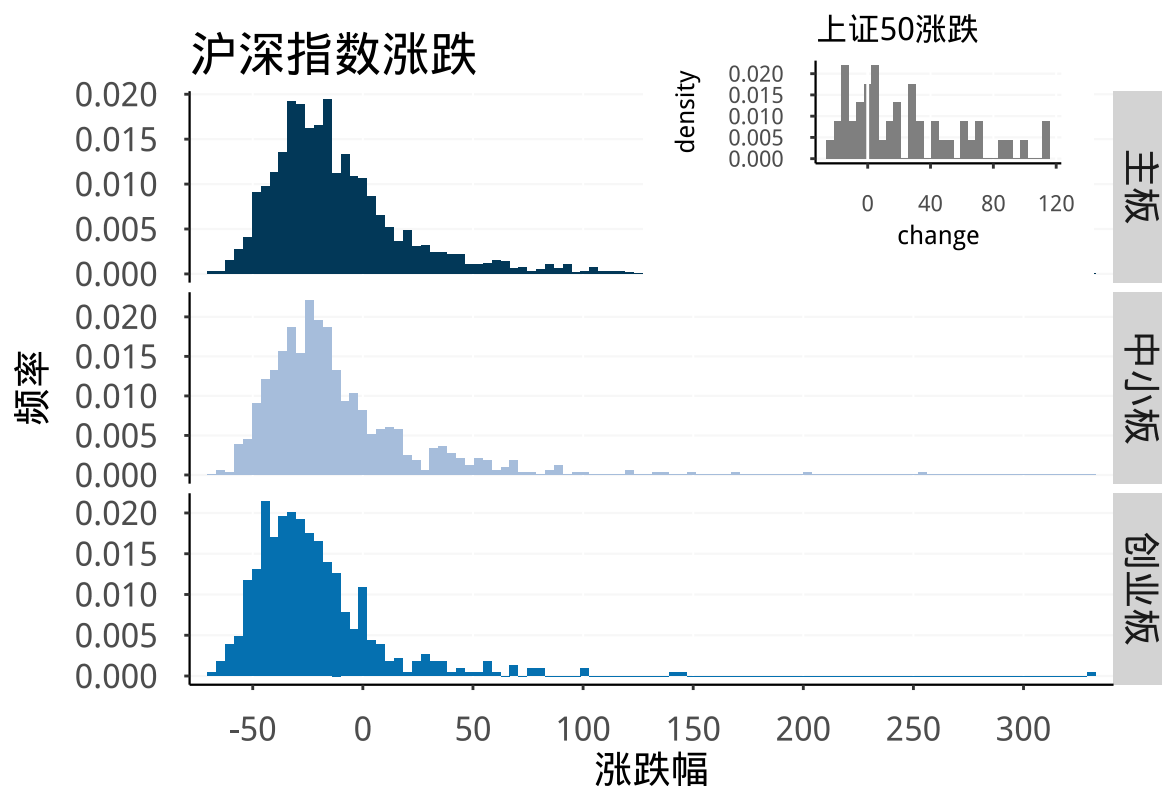
```
d_1 <- ggplot(stock,aes(x=mv17,y=change))+geom_point(aes(color=change),size=1)+
  geom_hline(yintercept = 0,size=0.5,color='grey')+
  labs(title='2017A股市值-涨跌幅分布图',x='2017市值/亿',y='涨跌幅/%')+
  scale_color_gradient2(low='#006837',mid = '#F0FFFF',high='#A50026')+
  theme_os(sd_size =1.8) %+replace% theme(legend.position = 'none')+
  scale_x_log10(breaks=c(0,50,100,200,1000,2000,5000))+ylim(-100,200)+
  stat_density2d(color='grey')
d_1
```



指数分布

分页直方图

```
d2 <- ggplot(stock,aes(x=change,fill=board))+ #分组并列柱形图
  geom_histogram(aes(y=..density..),bins=100)+facet_grid(board~.,scales='free_y')+
  labs(title='沪深指数涨跌',x='涨跌幅',y='频率')+
  scale_x_continuous(breaks=seq(-100,400,50),expand=c(0.02,0.02))+
  theme_os(sd_size = 1.8)+guides(fill=FALSE)+
  scale_fill_manual(values=c('#023858','#A6BDDB','#0570B0'))#
d2_1 <- ggplot(stock_sz50,aes(x=change),alpha=0.2,size=0.2)+
  labs(title='上证50涨跌')+
  geom_histogram(aes(y=..density..),bins=30,fill='grey50')+
  geom_vline(xintercept = 0,color='white')+
  theme_os(sd_size = 1.2)
library(grid)
vp <- viewport(x=0.72,y=0.82,width=0.36,height=0.36)#用viewport函数指定子图的大小的位置
d2
print(d2_1,vp=vp)
```



市值变化

```
library(plyr)

stock_mv <- ddply(stock,.(board),summarise,mv17_t=sum(mv17),mv18_t=sum(mv18))%>%
  rbind(. ,cbind(board='上证50',ddply(stock_sz50,.(board),
                                         summarise,mv17_t=sum(mv17),mv18_t=sum(mv18))[,2:3]))

stock_mv$x2017 <- stock_mv$mv17_t/stock_mv[1,2]*100
stock_mv$x2018 <- stock_mv$mv18_t/stock_mv[1,2]*100

library(reshape2)

stock_mv <- melt(stock_mv,id.vars = c('board','mv17_t','mv18_t'))
stock_mv$value <- stock_mv$value*10/max(stock_mv$value)
stock_mv$xmin <- rep(c(0,8),each=4)
stock_mv$xmax <- rep(c(2,10),each=4)
stock_mv$xlabs <- (stock_mv$xmin+stock_mv$xmax)/2
stock_mv <- plyr::arrange(stock_mv,-value)
poly <- cbind(board=rep(as.character(unique(stock_mv$board)),each=4),
              data.frame(matrix(c(8,10,8,3.96,2,3.1684,2,8.996,
                                  2,3.1684,8,3.96,8,2.2757,2,2.2475,
                                   8,2.2757,2,2.2475,2,1.1875,8,0.9946,
```

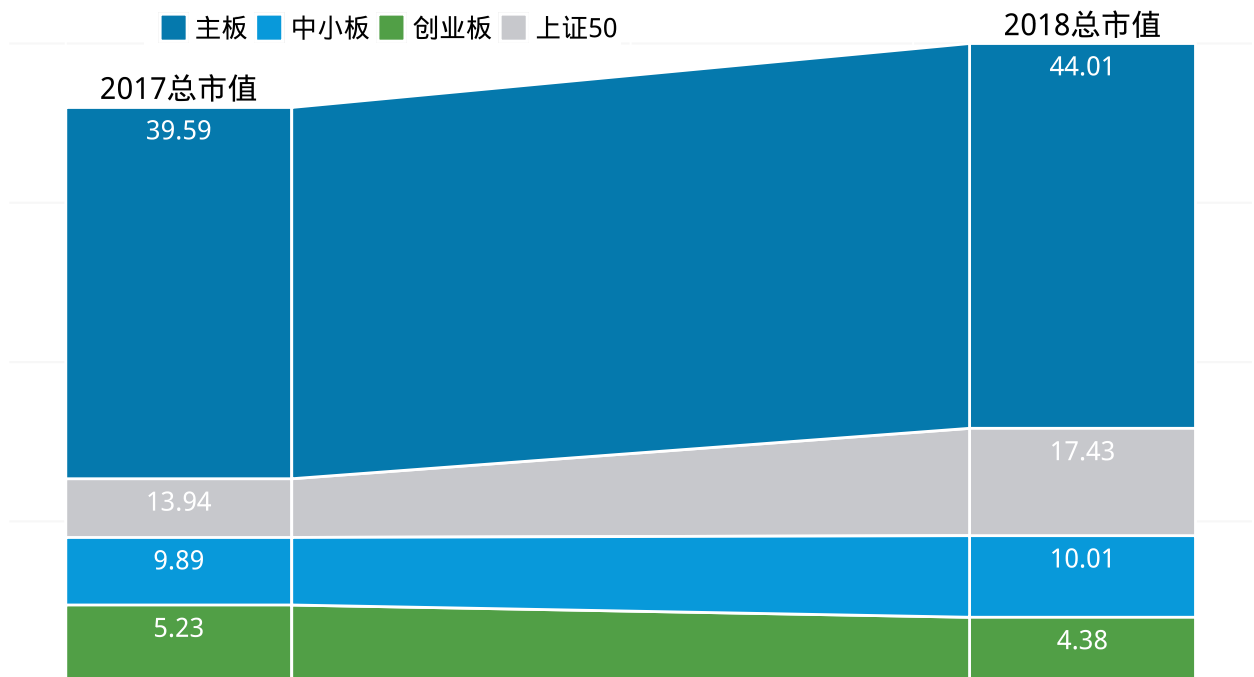
```

                                2,1.1875,8,0.9946,8,0,2,0),
                                nrow=16,byrow = T)))%>%
  set_colnames(c('board','lat','long'))
d3 <- ggplot()+
  geom_rect(data=stock_mv,aes(xmin=xmin,xmax=xmax,ymin=0,ymax=ymax,fill=board),
            colour='white')+
  geom_text(data=stock_mv,aes(x=xlab,y=ymax-0.5,label=round(value/100*395902/10000,2)),
            size=3.5,colour='white',vjust=0)+
  geom_text(aes(x=c(1,9),y=c(9.3,10.3)),label=c('2017总市值','2018总市值'),size=4)+
  geom_polygon(data=poly,aes(x=lat,y=long,fill=board),color='white')+
  guides(fill=guide_legend(title=NULL))+
  scale_fill_manual(values=c("#0579AD","#0899DA","#519F46","#C7C8CC"))+
  labs(title="2017-2018指数总市值变化:万亿",caption="DataResoure:Wind")+
  theme_os(base_size=10,base_family="myfzhzh") %+replace%
  theme(legend.position=c(.3,.95),
        legend.text = element_text(size=10),
        legend.direction = "horizontal",
        axis.line.x=element_blank(),axis.line.y = element_blank(),
        axis.text.x=element_blank(),axis.text.y = element_blank(),
        axis.ticks.x = element_blank(),axis.ticks.y = element_blank(),
        axis.title.x = element_blank(),axis.title.y = element_blank(),
        plot.title=element_text(size=16,hjust=0.08),
        plot.caption=element_text(size=10,hjust=0),
        plot.margin=margin(10,0,10,0,unit="pt"))

```

d3

2017-2018指数总市值变化:万亿



DataResoure:Wind

仪表盘图

```
library(sca)
bardata<-seq(from=0,to=270,length=1000)
rectdata<-seq(from=0,to=270,by=27)%>%c(360)
target<- c(0.0800+0.057+0.126,0.067+0.051+0.113,0.04+0.031+0.074)
assist <- target*270
d4 <- ggplot(data=NULL)+
  geom_rect(aes(xmin=rectdata[-12],xmax=rectdata[-1],ymin=5,ymax=10),
    fill="#F2F2F2",col="white")+
  geom_bar(aes(x=bardata,y=5,col=bardata),stat="identity",fill=NA,size=2)+
  geom_text(aes(x=rectdata[-12],y=10,label=seq(0,100,by=10)),
    vjust=.5,hjust=.5,size=3,col="#0F1110")+
  geom_segment(aes(x=assist[1],y=-50,xend=assist[1],yend=-10),
    arrow =arrow(length=unit(0.4,"cm")),size=1.2,col="#228B22")+
  geom_point(aes(x=assist[1],y=-50),shape=21,fill="white",col="black",size=5)+
  annotate("text",x=315,y=-30,label=percent(target[1]),size=4,hjust=.5,vjust=.5,
    col=ifelse(target[1]>.5,"#F32626","#38E968"),fontface="plain")+
  annotate("text",x=315,y=-15,label="上证",size=4,hjust=.5,vjust=.5)+
```

```

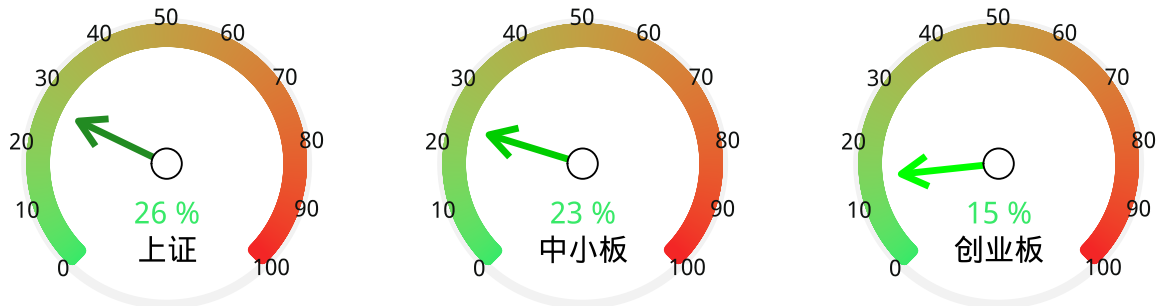
ylim(-50,12)+
coord_polar(theta="x",start=179.85)+
scale_colour_gradient(low="#38E968",high="#F32626",guide=FALSE)+
theme_minimal()+
theme(
  text=element_blank(),
  line=element_blank(),
  rect=element_blank()
)
d5 <- ggplot(data=NULL)+
  geom_rect(aes(xmin=rectdata[-12],xmax=rectdata[-1],ymin=5,ymax=10),
    fill="#F2F2F2",col="white")+
  geom_bar(aes(x=bardata,y=5,col=bardata),stat="identity",fill=NA,size=2)+
  geom_text(aes(x=rectdata[-12],y=10,label=seq(0,100,by=10)),
    vjust=.5,hjust=.5,size=3,col="#0F1110")+
  geom_segment(aes(x=assist[2],y=-50,xend=assist[2],yend=-10),
    arrow =arrow(length=unit(0.4,"cm")),size=1.2,col="green3")+
  geom_point(aes(x=assist[2],y=-50),shape=21,fill="white",col="black",size=5)+
  annotate("text",x=315,y=-30,label=percent(target[2]),size=4,hjust=.5,vjust=.5,
    col=ifelse(target[2]>.5,"#F32626","#38E968"),fontface="plain")+
  annotate("text",x=315,y=-15,label="中小板",size=4,hjust=.5,vjust=.5)+
  ylim(-50,12)+
  coord_polar(theta="x",start=179.85)+
  scale_colour_gradient(low="#38E968",high="#F32626",guide=FALSE)+
  theme_minimal()+
  theme(
    text=element_blank(),
    line=element_blank(),
    rect=element_blank()
  )
d6 <- ggplot(data=NULL)+
  geom_rect(aes(xmin=rectdata[-12],xmax=rectdata[-1],ymin=5,ymax=10),
    fill="#F2F2F2",col="white")+
  geom_bar(aes(x=bardata,y=5,col=bardata),stat="identity",fill=NA,size=2)+
  geom_text(aes(x=rectdata[-12],y=10,label=seq(0,100,by=10)),
    vjust=.5,hjust=.5,size=3,col="#0F1110")+
  geom_segment(aes(x=assist[3],y=-50,xend=assist[3],yend=-10),
    arrow =arrow(length=unit(0.4,"cm")),size=1.2,col="#00FF00")+
  geom_point(aes(x=assist[3],y=-50),shape=21,fill="white",col="black",size=5)+

```

```

annotate("text",x=315,y=-30,label=percent(target[3]),size=4,hjust=.5,vjust=.5,
        col=ifelse(target[3]>.5,"#F32626","#38E968"),fontface="plain")+
annotate("text",x=315,y=-15,label="创业板",size=4,hjust=.5,vjust=.5)+
ylim(-50,12)+coord_polar(theta="x",start=179.85)+
scale_colour_gradient(low="#38E968",high="#F32626",guide=FALSE)+
theme_minimal()+
theme(
  text=element_blank(),
  line=element_blank(),
  rect=element_blank()
)
library(Rmisc)
multiplot(d4,d5,d6,cols=3)

```



```

# 行业分布
## 树状图

```

```

library(treemapify)
library(tweenr)
library(gganimate)

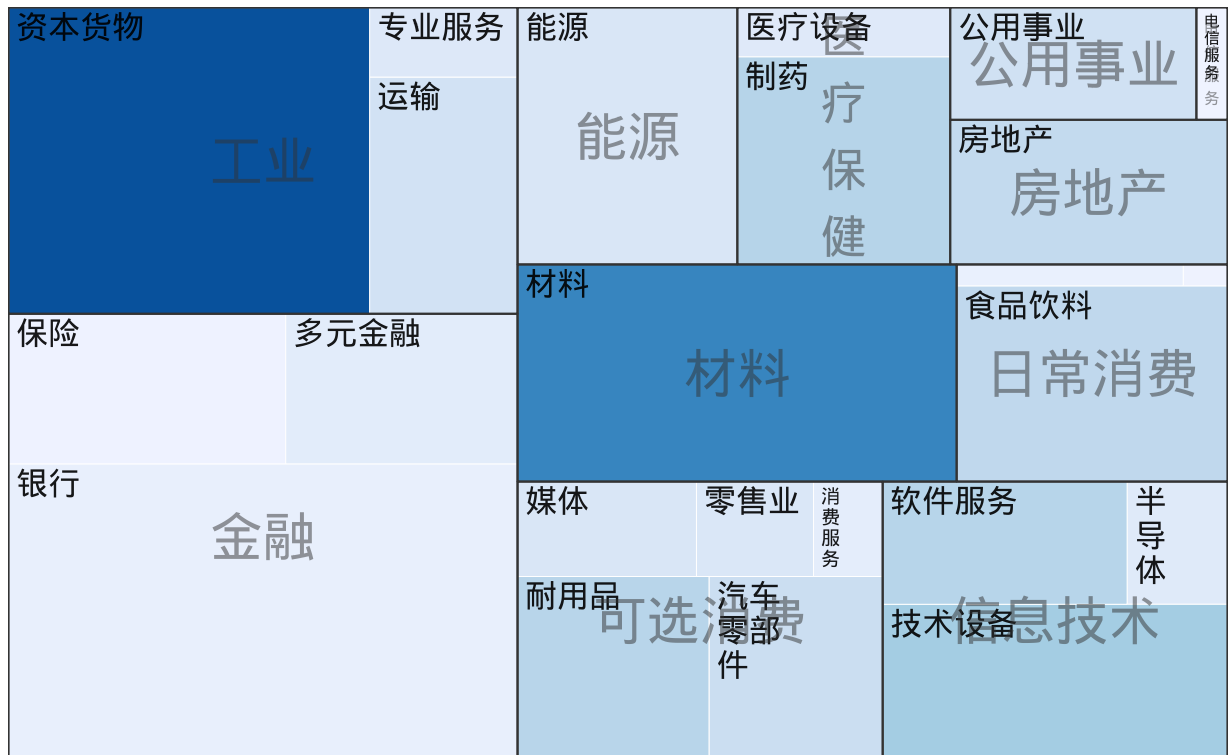
```

```

library(RColorBrewer)
stock_ind <- ddply(stock,.(w_ind1,w_ind2),summarize,
  mv_tot17=sum(mv17,na.rm = T),
  mv_tot18=sum(mv18,na.rm = T),
  pe_17=weighted.mean(pe17,na.rm = T),
  pe_18=weighted.mean(pe18,na.rm = T),
  counts=length(company)) %>%
  set_colnames(c('WindOne','WindTwo','MV2017','MV2018','2017PE','2018PE','Counts'))
d_7 <- ggplot(stock_ind,aes(area=MV2018,label=WindTwo,subgroup=WindOne))+
  geom_treemap(aes(fill=Counts),color='white')+
  geom_treemap_text(fontface='italic',size=12,colour='black',
    place='topleft',reflow=T,alpha=0.9)+
  geom_treemap_subgroup_border(colour='grey20',size=1)+
  geom_treemap_subgroup_text(size=20,colour="grey20",
    place="centre",reflow=T,alpha=0.5)+
  scale_fill_distiller('',palette='Blues',direction=1)+guides(fill=FALSE)+
  labs(title='2018上市企业市值行业分布',
    captions='注:格子面积与行业市值正比,颜色深度与行业企业数正比')+
  theme(plot.caption = element_text(hjust=0,size=8,color='grey50'),
    plot.title = element_text(hjust=0.5,size=16))
d_7

```


2018上市企业市值行业分布



注:格子面积与行业市值成正比,颜色深度与行业企业数成正比

直方图

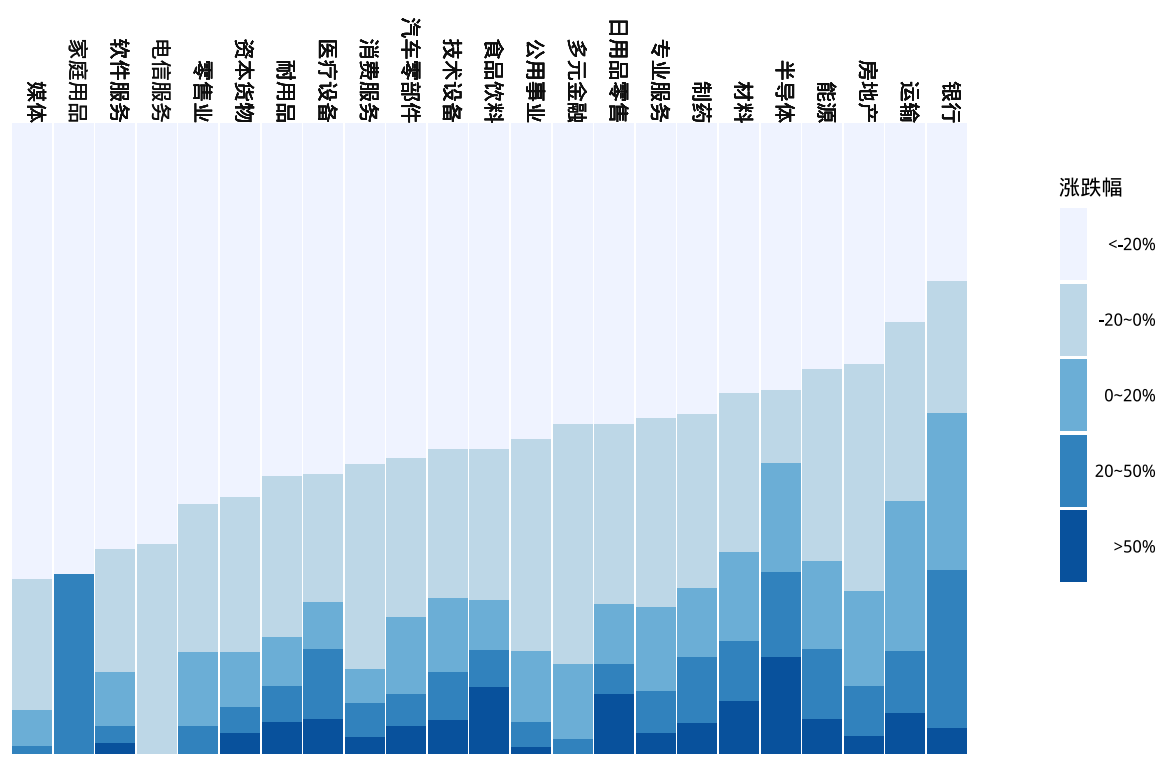
```
library(plyr)
library(tidyr)
library(dplyr)
library(scales)

stock_ind2 <- dplyr::summarize(stock,.(w_ind2,change_d),summarize(count2=length(company)))%>%
  plyr::join(.,ddply(stock,.(w_ind2),summarize(count=length(company)),
    by='w_ind2',type='full'))

stock_ind2$per <- round(stock_ind2$count2/stock_ind2$count*100,2)
d8 <- ggplot(data=stock_ind2,aes(x=w_ind2,y=per,fill=change_d))+
  geom_bar(stat='identity',width=0.95)+
  geom_text(aes(x=w_ind2,y=100,label=w_ind2),size=2.8,
    color='grey6',angle=-90,vjust=0.2,hjust=1)+
  scale_x_discrete(limits=plyr::arrange(stock_ind2,change_d,-per)$w_ind2[1:24])+
  scale_fill_brewer('涨跌幅',palette = 'Blues')+
  ylim(0,118)+
  theme(text=element_text(size=8),
    line=element_blank(),
    rect=element_blank(),
```

```
axis.text=element_blank(),
axis.title=element_blank(),
legend.position='right',
legend.direction='vertical',
legend.justification = 0.1,
legend.text.align = 1,
legend.key.size=unit(.4,'cm'),
legend.key.height = unit(1,'cm'),
legend.box.margin = unit(c(0,0,0,0),'points'),
plot.title = element_text(size=12),
plot.margin = unit(c(0,0,1,2),'lines'))
```

d8



地图

```
#中国地图
library(maptools)
library(rgdal)
```

```

map_data_china <- rgdal::readOGR('DataWarehouse-master/Rstudy/CHN_adm/bou2_4p.shp')

## OGR data source with driver: ESRI Shapefile
## Source: "DataWarehouse-master/Rstudy/CHN_adm/bou2_4p.shp", layer: "bou2_4p"
## with 925 features
## It has 7 fields
## Integer64 fields read as strings: BOU2_4M_ BOU2_4M_ID

map_province <- map_data_china@data %>% data.frame(.,id=seq(0:924)-1)#省份信息
library(ggplot2)
map_china <- fortify(map_data_china) %>% plyr::join(.,map_province,type='full')#地图转化为数据框
#省会信息
map_city_data <- read.csv('DataWarehouse-master/Rstudy/CHN_adm/chinaprovincecity.csv') %>% set_col
# CHN_adm <- rgdal::readOGR("DataWarehouse-master/Rstudy/CHN_adm/CHN_adm2.shp",encoding = 'gbk')
# map_data_c2 <- readShapePoly('DataWarehouse-master/Rstudy/CHN_adm/bou2_4p.shp')
library(plyr)
stock_province_mv <- ddply(stock,.(province),summarize,mv_total=sum(mv18)) %>%
  set_colnames(c('NAME','mv_total'))
stock_count <- data.frame(table(stock$province)) %>% set_colnames(c('NAME','count')) %>%
  plyr::join(stock_province_mv,.,by='NAME')
library(stringr)
map_china$NAME <- map_china$NAME %>% as.character(.) %>% str_sub(.,1,2) %>%
  str_replace(.,'黑龙','黑龙江') %>% str_replace(.,'内蒙','内蒙古') %>% as.factor(.)
stock_count$NAME <- stock_count$NAME %>% as.character(.) %>% str_sub(.,1,2) %>%
  str_replace(.,'黑龙','黑龙江') %>% str_replace(.,'内蒙','内蒙古') %>% as.factor(.)
map_city_data$NAME <- map_city_data$NAME %>% as.character(.) %>% str_sub(.,1,2) %>%
  str_replace(.,'黑龙','黑龙江') %>% str_replace(.,'内蒙','内蒙古') %>% as.factor(.)
map_china <- plyr::join(map_china,stock_count,by='NAME',type='full')
map_city <- plyr::join(stock_count,map_city_data[,1:4],by='NAME',type='inner')
#=====城市市值地图=====
library(ggplot2)
library(ggthemes)
d_map1 <- ggplot(map_china,aes(x=long,y=lat,fill=log(mv_total))) +
  geom_polygon(aes(group=group),colour="grey40")+
  scale_fill_distiller('总市值',breaks=c(7.6,9.21,9.90,10.82,11.51),
    labels=c('2e3','1e4','2e4','5e4','1e5'),
    palette = 'Blues',direction = 0)+#指定渐变填充色, 可使用RGB
  coord_map("polyconic")+ggtitle('中国上市公司总市值各省份分布')+
  geom_text(data=map_city,aes(x=long,y=lat,label=NAME),size=3,colour='#8B0000',
    fontface='bold',

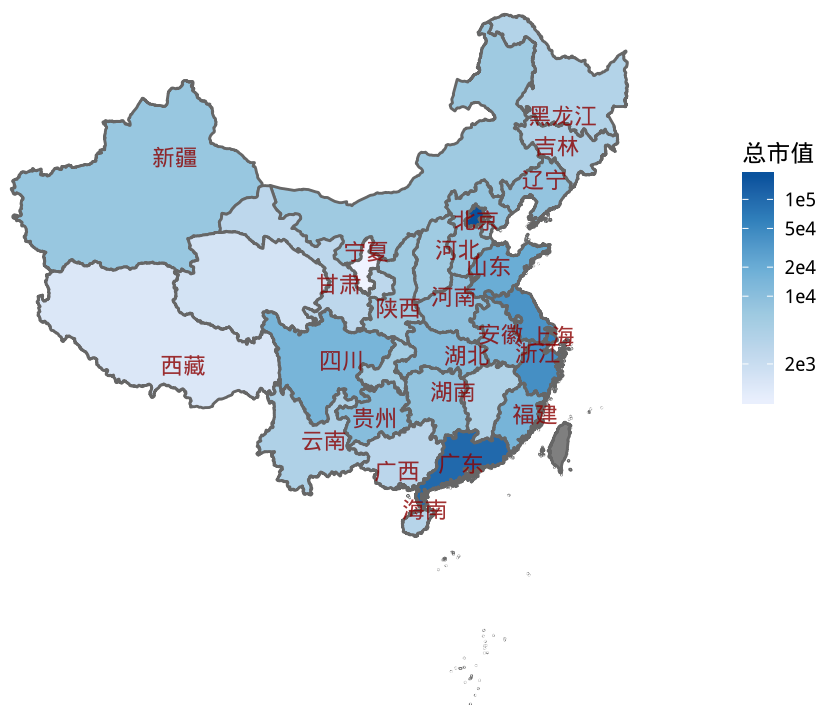
```

```

alpha=0.8,check_overlap = T)+
theme_map() %>replace% theme(legend.position = c(0.9,0.4),
                             legend.key.width = unit(0.8,'lines'),
                             legend.text.align= 1,
                             legend.title = element_text(),
                             plot.margin = unit(c(0,0,0,0),'lines'),
                             plot.title=element_text(margin = margin(t=10),
                                                         hjust=0.5,face='bold',
                                                         size=rel(1.6)))
d_map1

```

中国上市公司总市值各省份分布



#地图2

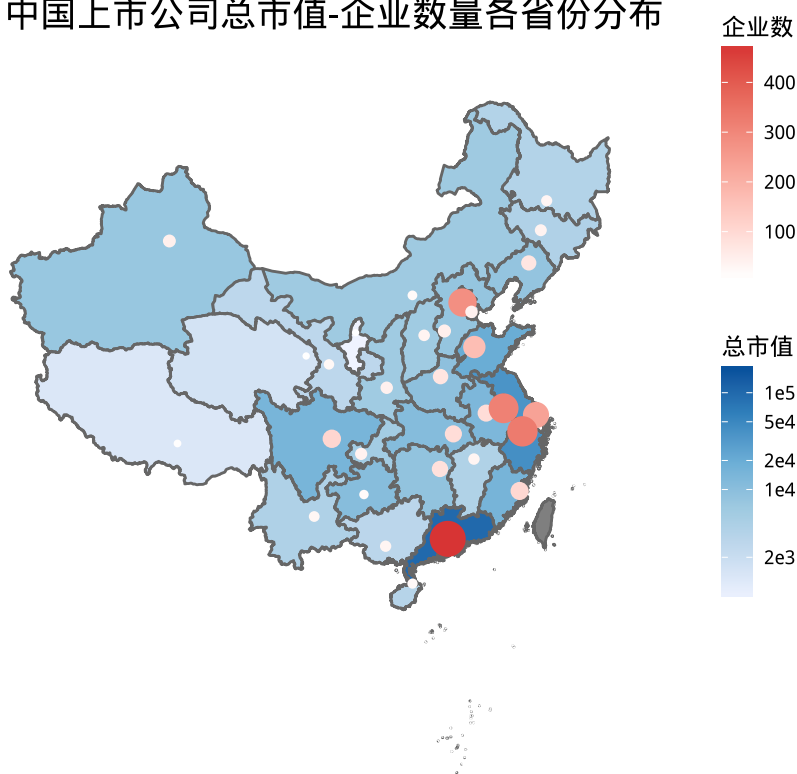
```

d_map2 <- ggplot(map_china,aes(x=long,y=lat,fill=log(mv_total)),colour='white')+
  geom_polygon(aes(group=group),colour='grey40')+
  scale_fill_distiller('总市值',breaks=c(7.6,9.21,9.90,10.82,11.51),
                      labels=c('2e3','1e4','2e4','5e4','1e5'),
                      palette = 'Blues',direction = 0)+
  geom_point(aes(x=long,y=lat,size=count,colour=count),shape=16,data=map_city)+
  scale_colour_gradient('企业数',low='white',high='#D73434')+

```

```
scale_size_area('企业\n数量',max_size=6,guide=FALSE)+
coord_map("polyconic")+ggtitle('中国上市公司总市值-企业数量各省份分布')+
theme_map() %+replace% theme(legend.position = c(0.9,0.25),
                             legend.key.width = unit(0.8,'lines'),
                             legend.text.align= 1,
                             legend.title = element_text(),
                             plot.title=element_text(margin = margin(t=10),
                                                         hjust=0.5,face='bold',size=rel(1.5)))
d_map2
```

中国上市公司总市值-企业数量各省份分布



ALLSTART

```
##红色版
plyr::arrange(stock,-change)[1:10,]
```

```
##          code  company  board province  city      ipo industry  w_ind1
## 1  300176.SZ  鸿特精密  创业板  广东省  肇庆市  2011-02-15    汽车  可选消费
## 2  601313.SH  江南嘉捷  主板   江苏省  苏州市  2012-01-16    机械设备  工业
```

## 3	603929.SH	亚翔集成	主板	江苏省	苏州市	2016-12-30	建筑装饰	工业
## 4	002833.SZ	弘亚数控	中小板	广东省	广州市	2016-12-28	机械设备	工业
## 5	600516.SH	方大炭素	主板	甘肃省	兰州市	2002-08-30	有色金属	材料
## 6	002836.SZ	新宏泽	中小板	广东省	潮州市	2016-12-29	轻工制造	工业
## 7	000830.SZ	鲁西化工	主板	山东省	聊城市	1998-08-07	化工	材料
## 8	601012.SH	隆基股份	主板	陕西省	西安市	2012-04-11	电气设备	信息技术
## 9	002460.SZ	赣锋锂业	中小板	江西省	新余市	2010-08-10	有色金属	材料
## 10	601155.SH	新城控股	主板	江苏省	常州市	2015-12-04	房地产	房地产
##	w_ind2 fluidcap			control turnover				
## 1	汽车零部件	1.0698		卢础其,卢楚隆,卢楚鹏			1.8336	
## 2	资本货物	3.9718		金志峰,金祖铭			2.6376	
## 3	资本货物	0.5336		姚祖骧,赵玉华			9.2637	
## 4	资本货物	0.3336		李茂洪,刘风华,刘雨华			8.9399	
## 5	材料	17.1916		方威			9.0294	
## 6	专业服务	0.2000		孟学,张宏清			17.4671	
## 7	材料	14.6398	聊城市人民政府国有资产监督管理委员会				5.0443	
## 8	半导体	17.4922		李喜燕,李振国			1.8114	
## 9	材料	5.2075		李良彬			6.7112	
## 10	房地产	7.0468		王振华			2.1014	
##	vol	change	price	mv17	mv18	pe17	pe18	pcf17
## 1	0.8896	329.6937	130.10	32.5809	139.5713	58.8240	46.7557	93.2222
## 2	2.6727	294.2001	45.97	46.9470	182.5848	24.5291	246.7505	-16.9166
## 3	1.4117	269.3081	26.07	15.1699	55.6230	19.0872	48.1245	16.7549
## 4	1.5383	253.3321	62.05	23.4980	83.9623	16.7280	36.7148	26.1331
## 5	21.5329	212.4777	28.88	159.1943	516.6038	167.8561	25.7297	-26.6436
## 6	2.2966	201.4357	19.26	10.2560	30.8160	28.0673	62.9413	82.5611
## 7	4.7415	184.7943	15.92	81.8857	233.2058	69.1078	20.3690	-17.8777
## 8	5.4656	173.8316	36.44	267.3496	726.6098	19.4705	27.0155	6.9155
## 9	17.3485	171.2054	71.75	199.5396	532.2210	37.9082	54.1926	137.3084
## 10	2.6701	154.9105	29.30	265.4306	661.7359	11.6876	16.0300	2.2659
##	pcf18	ev17	eps	bps	roe	roa	debt ratio	eps_gr
## 1	25.9519	38.9373	2.6153	8.3594	36.40	19.0869	63.4615	772.3482
## 2	123.5530	47.9368	0.1129	4.2051	2.67	1.9360	35.3771	-66.0961
## 3	-32.1409	15.1699	0.4800	4.4778	11.07	7.8770	35.0558	-49.4737
## 4	108.4128	23.4980	1.4500	6.9110	23.77	24.0557	10.3509	20.8333
## 5	51.0231	169.8222	1.1640	4.6128	29.24	27.0310	25.0605	2441.4847
## 6	68.3636	10.6450	0.1800	2.5512	7.19	7.2045	19.9058	-28.0000
## 7	421.7104	193.5777	0.6630	4.7572	10.84	6.6581	63.3209	969.3548
## 8	86.0591	308.9072	1.1200	6.0943	20.12	11.7892	58.5689	80.6452

```
## 9    116.2372 206.5435 1.3500 4.1619 35.69 23.6134    50.7721 110.9375
## 10   -144.9978 504.6476 0.9000 7.1505 12.81  2.4886    88.4832 104.5455
##      ni_gr    or_gr    or_gr3    ni_gr3 dividend mv17_d change_d
## 1    772.2889  79.0713 106.8370 2215.4566    0.1537    0-50    >50%
## 2    -65.7516 -11.5242 -19.2411  -72.5191    0.2828    0-50    >50%
## 3    -32.6845 -30.3991      NA      NA    0.6137    0-50    >50%
## 4     61.1973  59.8285      NA      NA    0.2579    0-50    >50%
## 5   3514.9770 206.0356  97.9231  561.9652    0.0762 100-200    >50%
## 6     -4.4953 -11.1962      NA      NA    1.0384    0-50    >50%
## 7    497.1640  43.6367  19.0529  254.7246    0.0000  50-100    >50%
## 8    103.8432  27.2305 342.7402 1083.9298    0.2744 200-500    >50%
## 9    106.5352  40.5129 351.5466 1606.1867    0.1394 100-200    >50%
## 10   128.3415  42.3312      NA      NA    1.1263 200-500    >50%
```

```
xs <- seq(16-1.75,16+1.75,length=1000);ys <- sqrt(1.75^2-(xs-16)^2)+9.5
xs2 <- seq(16+1.75,16-1.75,length=1000);ys2 <- sqrt(1.75^2-(xs2-16)^2)+9.5
poly1 <- data.frame(x=c(xs,xs2),y=c(ys,ys2))

ys_1 <- seq(9.5-1.25,9.5+1.25,length=1000);xs_1 <- sqrt(1.25^2-(ys_1-9.5)^2)+7.8
poly2 <- data.frame(x=xs_1,y=ys_1)
poly3 <- data.frame(x=32-xs_1,y=ys_1)

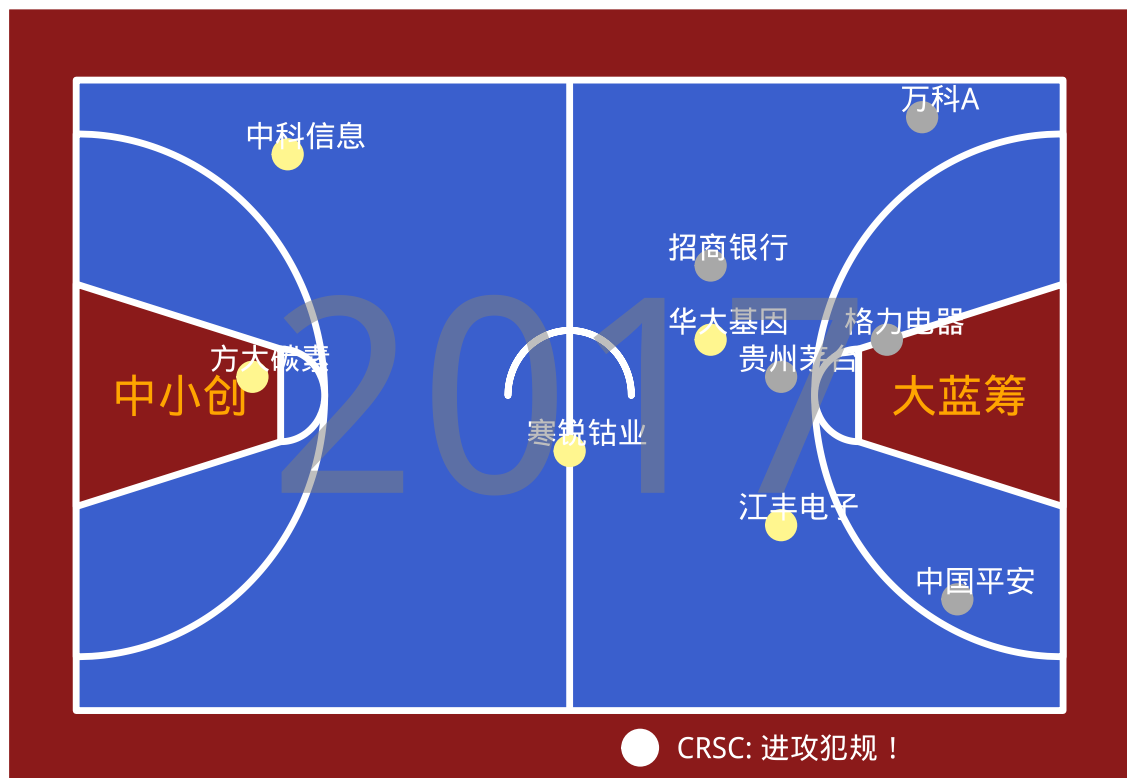
ys_2 <- seq(9.50-7.05,9.50+7.05,length=1000);xs_2 <- sqrt(7.05^2-(ys_2-9.50)^2)+2
poly4 <- data.frame(x=c(xs_2[1:999],2),y=ys_2)
poly5 <- data.frame(x=32-c(xs_2[1:999],2),y=ys_2)

set.seed(0997)
random <- data.frame(x=sample(5:24,5,replace = F)+2,
                    y=sample(3:15,5,replace=F)+2)%>%
  data.frame(com=c('中科信息','寒锐钴业','江丰电子','方大碳素','华大基因'),
            type=rep(1,5),..)
random2 <- data.frame(x=sample(16:28,5,replace = F),
                    y=sample(2:17,5,replace=F))%>%
  data.frame(com=c('贵州茅台','中国平安','招商银行','万科A','格力电器'),type=rep(2,5),..)
data <- rbind(random,random2)
data$type <- as.factor(data$type)
ggplot()+xlim(0,32)+ylim(-1,20)+
  geom_rect(aes(xmin=0,xmax=32,ymin=-1,ymax=20),fill='#8B1A1A',color='white',size=1.2)+
  geom_rect(data=NULL,aes(xmin=2,xmax=30,ymin=1,ymax=18),
            fill='#3A5FCD',color='white',size=1.2)+
```

```

geom_polygon(data=poly4,aes(x=x,y=y),fill='#3A5FCD',color='white',size=1.2)+
geom_polygon(data=poly5,aes(x=x,y=y),fill='#3A5FCD',color='white',size=1.2)+
geom_polygon(data=poly1,aes(x=x,y=y),fill='#8B1A1A',color='white',size=1.2)+
geom_polygon(data=poly2,aes(x=x,y=y),fill='#3A5FCD',color='white',size=1.2)+
geom_polygon(data=poly3,aes(x=x,y=y),fill='#3A5FCD',color='white',size=1.2)+
geom_polygon(data=NULL,aes(x=c(2,7.8,7.8,2),y=c(6.5,8.25,10.75,12.5)),
              fill='#8B1A1A',color='white',size=1.2)+
geom_polygon(data=NULL,aes(x=c(30,24.2,24.2,30),y=c(6.5,8.25,10.75,12.5)),
              fill='#8B1A1A',color='white',size=1.2)+
geom_line(data=NULL,aes(x=c(16,16),y=c(1,18)),color='white',size=1.2)+
annotate('text',x=3,y=9.5,label='中小创',hjust=0,size=6,color='orange')+
annotate('text',x=29,y=9.5,label='大蓝筹',hjust=1,size=6,color='orange')+
geom_point(data=data,aes(x=x,y=y,colour=type),size=5)+
geom_text(data=data,aes(x=x,y=y,label=com),size=4,color='white',
          nudge_x = 0.5,nudge_y = 0.5)+
geom_point(data=NULL,aes(x=18,y=0),size=6,colour='white')+
geom_text(data=NULL,aes(x=20,y=0),color='white',label='CRSC: 进攻犯规!',
          nudge_x = 1,hjust=0.3)+
geom_text(data=NULL,aes(x=16,y=9.5),label='2017',color='grey50',size=36,alpha=0.5)+
scale_color_manual(values = c('#FFF68F','grey66'),guide=FALSE)+
theme(plot.background = element_blank(),
      plot.margin = unit(c(0,0,0,0),'points'),
      panel.background=element_blank(),
      axis.title.x = element_blank(),axis.title.y = element_blank(),
      axis.text.x = element_blank(),
      axis.text.y = element_blank(),
      axis.ticks = element_blank())

```

```
#紫金色
#ys_2 <- seq(9.50-7.05,9.50+7.05,length=1000);xs_2 <- sqrt(7.05^2-(ys_2-9.50)^2)+2.5
poly4 <- data.frame(x=c(2,xs_2[1:999],2.5,2),y=c(9.50-7.05,ys_2,9.50+7.05))
poly5 <- data.frame(x=32-c(2,xs_2[1:999],2.5,2),y=c(9.50-7.05,ys_2,9.50+7.05))
windowsFonts(myfont=windowsFont('New Time Roman'))
ggplot()+xlim(0,32)+ylim(-1,20)+
  geom_rect(aes(xmin=0,xmax=32,ymin=-1,ymax=20),fill='#FFFF00',color='#6959CD',size=1.2)+
  geom_rect(aes(xmin=2,xmax=30,ymin=1,ymax=18),fill='#FFEC8B',color='#6959CD',size=1.2)+
  geom_polygon(data=poly4,aes(x=x,y=y),fill='#FFEC8B',color='#6959CD',size=1.2)+
  geom_polygon(data=poly5,aes(x=x,y=y),fill='#FFEC8B',color='#6959CD',size=1.2)+
  geom_polygon(data=poly1,aes(x=x,y=y),fill='#CD9B1D',color='#6959CD',size=1.2)+
  geom_polygon(data=poly2,aes(x=x,y=y),fill='#FFEC8B',color='#6959CD',size=1.2)+
  geom_polygon(data=poly3,aes(x=x,y=y),fill='#FFEC8B',color='#6959CD',size=1.2)+
  geom_polygon(data=NULL,aes(x=c(2,7.8,7.8,2),y=c(6.5,8.25,10.75,12.5)),
    fill='#6959CD',color='#6959CD',size=1.2)+
  geom_polygon(data=NULL,aes(x=c(30,24.2,24.2,30),y=c(6.5,8.25,10.75,12.5)),
    fill='#6959CD',color='#6959CD',size=1.2)+
  geom_line(data=NULL,aes(x=c(16,16),y=c(1,18)),color='#6959CD',size=1.2)+
```

```

annotate('text',x=3,y=9.5,label='中小创',hjust=0,size=6,color='orange')+
annotate('text',x=29,y=9.5,label='大蓝筹',hjust=1,size=6,color='orange')+
geom_point(data=data,aes(x=x,y=y,colour=type),size=5)+
geom_text(data=data,aes(x=x,y=y,label=com),size=4,color='black',
          nudge_x = 0.5,nudge_y = 0.5)+
geom_point(data=NULL,aes(x=18,y=0),size=6,colour='grey20')+
geom_text(data=NULL,aes(x=20,y=0),color='grey20',label='CRSC: Foul! ',
          nudge_x = 1,hjust=0.3)+
geom_text(data=NULL,aes(x=16,y=9.5),label='2017',family='myfont',
          color='#6959CD',size=20,alpha=0.5)+
scale_color_manual(values = c('#4F94CD','#8B5A2B'),guide=FALSE)+
theme(plot.background = element_blank(),
      plot.margin = unit(c(0,0,0,0),'points'),
      panel.background=element_blank(),
      axis.title.x = element_blank(),axis.title.y = element_blank(),
      axis.text.x = element_blank(),
      axis.text.y = element_blank(),
      axis.ticks = element_blank())

```

