game\_analysis

data <- read.csv('vw\_gameresults.csv')  
head(data)

## gameid leagid leagyear weeknum gamedate awayid atmloc aconfid  
## 1 120241 1 2024 1 2024-09-05 00:00:00 18 Baltimore 7  
## 2 120242 1 2024 1 2024-09-06 00:00:00 3 Green Bay 6  
## 3 120243 1 2024 1 2024-09-08 00:00:00 21 Pittsburgh 7  
## 4 120244 1 2024 1 2024-09-08 00:00:00 45 Arizona 6  
## 5 120245 1 2024 1 2024-09-08 00:00:00 26 Tennessee 7  
## 6 120246 1 2024 1 2024-09-08 00:00:00 11 New England 7  
## aconf adivid adivname homeid htmloc hconfid hconf hdivid hdivname  
## 1 American 4 North 15 Kansas City 7 American 14 West  
## 2 National 4 North 1 Philadelphia 6 National 5 East  
## 3 American 4 North 5 Atlanta 6 National 8 South  
## 4 National 14 West 9 Buffalo 7 American 5 East  
## 5 American 8 South 77 Chicago 6 National 4 North  
## 6 American 5 East 19 Cincinnati 7 American 4 North  
## ascore hscore spread ou totalou favid dogid winteamid loseteamid isconf  
## 1 20 27 3.0 46.5 47 15 18 15 18 1  
## 2 29 34 2.0 48.5 63 1 3 1 3 1  
## 3 18 10 4.0 42.0 28 5 21 21 5 0  
## 4 28 34 6.5 46.0 62 9 45 9 45 0  
## 5 17 24 4.0 44.0 41 77 26 77 26 0  
## 6 16 10 7.5 41.0 26 19 11 11 19 1  
## isdiv ot so lineoutcomeid lineoutcome totaloutcomeid  
## 1 0 0 0 3 favorite win and cover 6  
## 2 0 0 0 3 favorite win and cover 6  
## 3 0 0 0 2 dog win and cover 5  
## 4 0 0 0 4 dog cover | favorite win 6  
## 5 0 0 0 3 favorite win and cover 5  
## 6 0 0 0 2 dog win and cover 5  
## totaloutcome siteloc gametypeid  
## 1 over 1 1  
## 2 over 2 1  
## 3 under 1 1  
## 4 over 1 1  
## 5 under 1 1  
## 6 under 1 1

library(dplyr)

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

library(tidyr)  
det\_df <- read.csv('vw\_gameteamresultsdetail.csv')  
leagyear\_value = 2024  
df <- det\_df %>%  
 filter(leagyear == leagyear\_value, isfav == 1, iscover == 1) %>%  
 group\_by(leagid,spread) %>%  
 summarise(iscover\_sum = sum(iscover, na.rm = TRUE)) %>%  
 ungroup()

## `summarise()` has grouped output by 'leagid'. You can override using the  
## `.groups` argument.

df <- as.data.frame(df)  
head(df)

## leagid spread iscover\_sum  
## 1 1 1.0 8  
## 2 1 1.5 10  
## 3 1 10.0 3  
## 4 1 10.5 1  
## 5 1 11.0 2  
## 6 1 11.5 1

det1\_df <- read.csv('vw\_gameteamresultsdetail.csv')  
leagyear\_value = 2024  
df1 <- det1\_df %>%  
 filter(leagyear == leagyear\_value, isfav == 1, ispush == 0) %>%  
 group\_by(leagid,spread) %>%  
 summarise(  
 favcover = sum(iscover == 1, na.rm = TRUE),  
 dogcover = sum(iscover == 0, na.rm = TRUE)  
 ) %>%  
 ungroup() %>%  
 arrange(spread,leagid)

## `summarise()` has grouped output by 'leagid'. You can override using the  
## `.groups` argument.

df1 <- as.data.frame(df1)  
df1

## leagid spread favcover dogcover  
## 1 8 0.5 1 0  
## 2 8 1 0 1  
## 3 1 1.0 8 7  
## 4 8 1.0 7 3  
## 5 1 1.5 10 5  
## 6 8 1.5 19 19  
## 7 13 1.5 325 510  
## 8 1 10.0 3 1  
## 9 8 10.0 9 10  
## 10 1 10.5 1 1  
## 11 8 10.5 8 14  
## 12 1 11.0 2 1  
## 13 8 11.0 3 2  
## 14 1 11.5 1 0  
## 15 8 11.5 6 12  
## 16 1 12.0 0 1  
## 17 8 12.5 4 9  
## 18 8 13.0 1 1  
## 19 1 13.5 1 1  
## 20 8 13.5 9 18  
## 21 1 14.0 1 2  
## 22 8 14.0 5 7  
## 23 8 14.5 17 6  
## 24 8 15.5 6 2  
## 25 1 16.0 1 0  
## 26 8 16.5 13 11  
## 27 8 17 1 0  
## 28 8 17.0 4 2  
## 29 8 17.5 4 8  
## 30 8 18.0 1 0  
## 31 8 18.5 4 5  
## 32 8 19.5 6 6  
## 33 1 2.0 8 2  
## 34 8 2.0 2 5  
## 35 1 2.5 13 16  
## 36 8 2.5 32 41  
## 37 13 2.5 1 3  
## 38 1 20.0 1 0  
## 39 8 20.0 1 1  
## 40 8 20.5 15 5  
## 41 8 2024-08-29 00:00:00 1 0  
## 42 8 2024-08-31 00:00:00 0 2  
## 43 8 2024-09-07 00:00:00 2 1  
## 44 8 2024-09-13 00:00:00 0 1  
## 45 8 2024-09-14 00:00:00 1 1  
## 46 8 2024-09-21 00:00:00 1 1  
## 47 8 2024-09-28 00:00:00 1 1  
## 48 8 2024-10-04 00:00:00 0 1  
## 49 8 2024-10-05 00:00:00 0 2  
## 50 8 2024-10-11 00:00:00 0 1  
## 51 8 2024-10-12 00:00:00 0 2  
## 52 8 2024-10-19 00:00:00 1 2  
## 53 8 2024-10-25 00:00:00 1 0  
## 54 8 2024-10-26 00:00:00 1 0  
## 55 8 2024-11-02 00:00:00 0 1  
## 56 8 2024-11-08 00:00:00 1 1  
## 57 8 2024-11-09 00:00:00 0 1  
## 58 8 2024-11-15 00:00:00 1 0  
## 59 8 2024-11-16 00:00:00 0 2  
## 60 8 2024-11-22 00:00:00 1 0  
## 61 8 2024-11-23 00:00:00 1 1  
## 62 8 2024-11-30 00:00:00 2 1  
## 63 8 2024-12-06 00:00:00 1 0  
## 64 8 21.0 2 3  
## 65 8 21.5 5 6  
## 66 8 22.0 0 1  
## 67 8 22.5 0 10  
## 68 8 23.0 1 0  
## 69 8 23.5 7 7  
## 70 8 24.0 2 3  
## 71 8 24.5 3 8  
## 72 8 25.0 0 1  
## 73 8 25.5 3 5  
## 74 8 26.5 5 1  
## 75 8 27.5 10 4  
## 76 8 28.5 6 6  
## 77 8 29.5 3 1  
## 78 1 3.0 20 16  
## 79 8 3.0 19 22  
## 80 1 3.5 20 16  
## 81 8 3.5 21 22  
## 82 8 30.5 2 2  
## 83 8 31.0 1 1  
## 84 8 31.5 1 2  
## 85 8 32.5 0 4  
## 86 8 33.5 3 6  
## 87 8 34.0 1 0  
## 88 8 34.5 6 2  
## 89 8 35.5 5 0  
## 90 8 36.5 3 2  
## 91 8 37.5 1 3  
## 92 8 38.5 4 1  
## 93 8 39.5 0 2  
## 94 1 4.0 8 4  
## 95 8 4.0 6 7  
## 96 1 4.5 7 4  
## 97 8 4.5 17 14  
## 98 8 40.5 3 2  
## 99 8 41.0 1 0  
## 100 8 41.5 3 0  
## 101 8 42.5 4 1  
## 102 8 43.5 1 1  
## 103 8 44.5 3 2  
## 104 8 45.5 0 1  
## 105 8 46.5 2 0  
## 106 8 48.0 0 1  
## 107 8 48.5 2 0  
## 108 8 49.5 1 1  
## 109 1 5.0 2 2  
## 110 8 5.0 0 1  
## 111 1 5.5 8 4  
## 112 8 5.5 15 9  
## 113 8 50.5 0 1  
## 114 8 51.5 0 1  
## 115 8 53.5 0 1  
## 116 1 6.0 11 6  
## 117 8 6.0 5 3  
## 118 1 6.5 7 11  
## 119 8 6.5 22 22  
## 120 1 7.0 6 6  
## 121 8 7.0 12 12  
## 122 1 7.5 8 12  
## 123 8 7.5 23 12  
## 124 1 8.0 0 1  
## 125 8 8.0 0 2  
## 126 1 8.5 1 2  
## 127 8 8.5 14 12  
## 128 1 9.0 2 1  
## 129 8 9.0 2 2  
## 130 1 9.5 3 4  
## 131 8 9.5 12 11

library(dplyr)  
library(ggplot2)  
df\_nfl <- df1 %>% filter(leagid == 1)  
if(!is.numeric(df\_nfl$spread)) {  
 df\_nfl$spread <- as.numeric((as.character(df\_nfl$spread)))  
}  
df\_nfl <- df\_nfl %>% arrange(spread)  
# df\_nfl <- df\_nfl[order(df\_nfl$spread,decreasing = FALSE), ]  
df\_nfl$spread <- factor(df\_nfl$spread, levels = sort(unique(df\_nfl$spread)))  
# df1 <- df1 %>% filter(spread >= 0 & spread <= 100)  
ggplot(df\_nfl, aes(x = spread)) +  
 geom\_bar(aes(y = favcover, fill = 'Favorite'), stat = 'identity', position = position\_dodge()) +  
 geom\_bar(aes(y = dogcover, fill = 'Dog'), stat = 'identity', position = position\_dodge()) +  
 labs(  
 title = 'Cover Counts by Spread',  
 subtitle = 'Comparing Favs and Dogs',  
 x = 'Spread',  
 y = 'Covers',  
 fill = 'Cover Type'  
 ) +  
 theme\_minimal() +  
 theme(legend.position = 'top') +  
 theme(axis.text.x = element\_text(angle = 90, hjust = 1, vjust = 0.5))

