bringing Pantry & Bus Stops Closer

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```
library(ggmap)
```

```
## Warning: package 'ggmap' was built under R version 3.2.2
```

```
## Loading required package: ggplot2
```

```
## Warning: package 'ggplot2' was built under R version 3.2.2
```

```
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 3.2.2
```

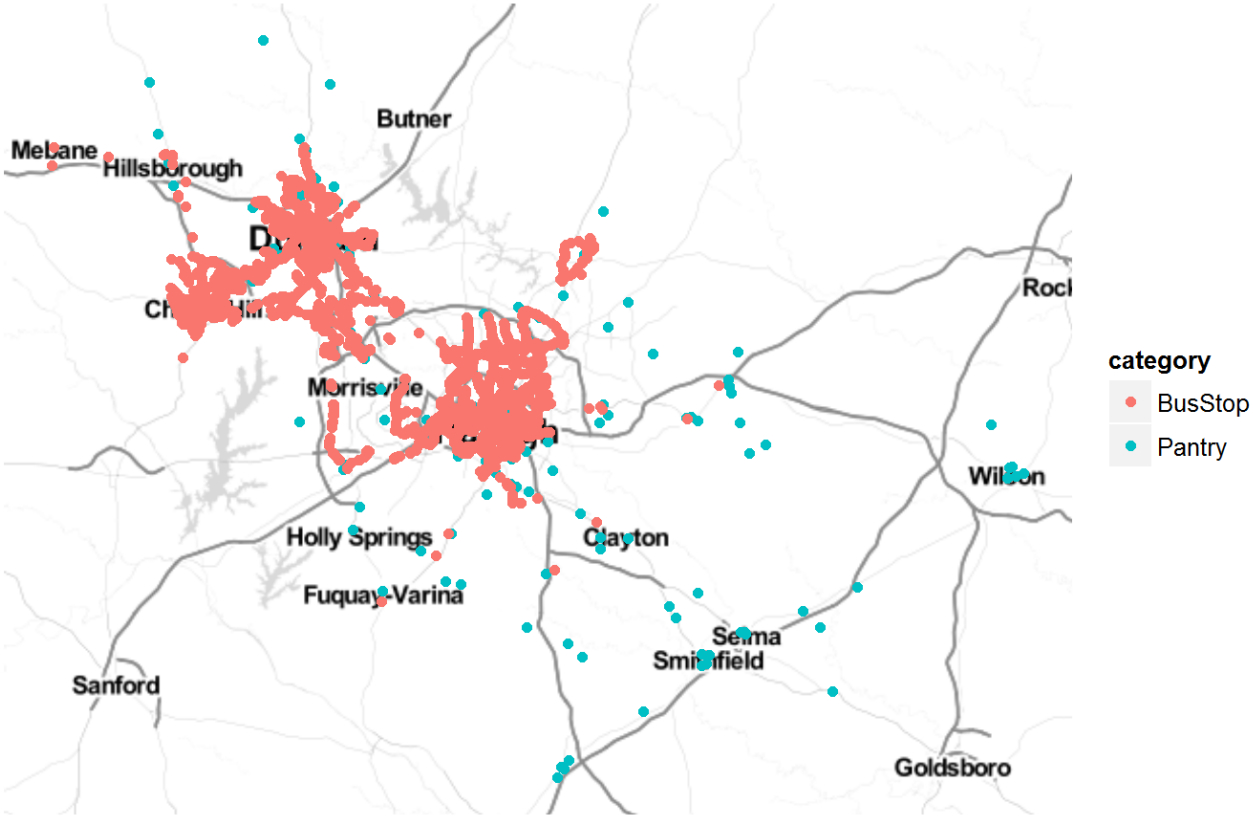
```
##
## Attaching package: 'dplyr'
##
## The following objects are masked from 'package:stats':
##
##     filter, lag
##
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(ggplot2)
#reading data from pantries.csv and busstops.rds
pantry <- read.csv("pantries.csv",sep=",",header=T)
bus_stop <- readRDS("busstops.rds")

pantry_busstop_analysis <- read.csv("pantry_bus_availability_by_county.csv",hea
der=T,sep=",")

names(pantry_busstop_analysis) <-
                                c("County","Food Pantry","With Bus Service","%
Bus Service")

head(pantry_busstop_analysis)
```

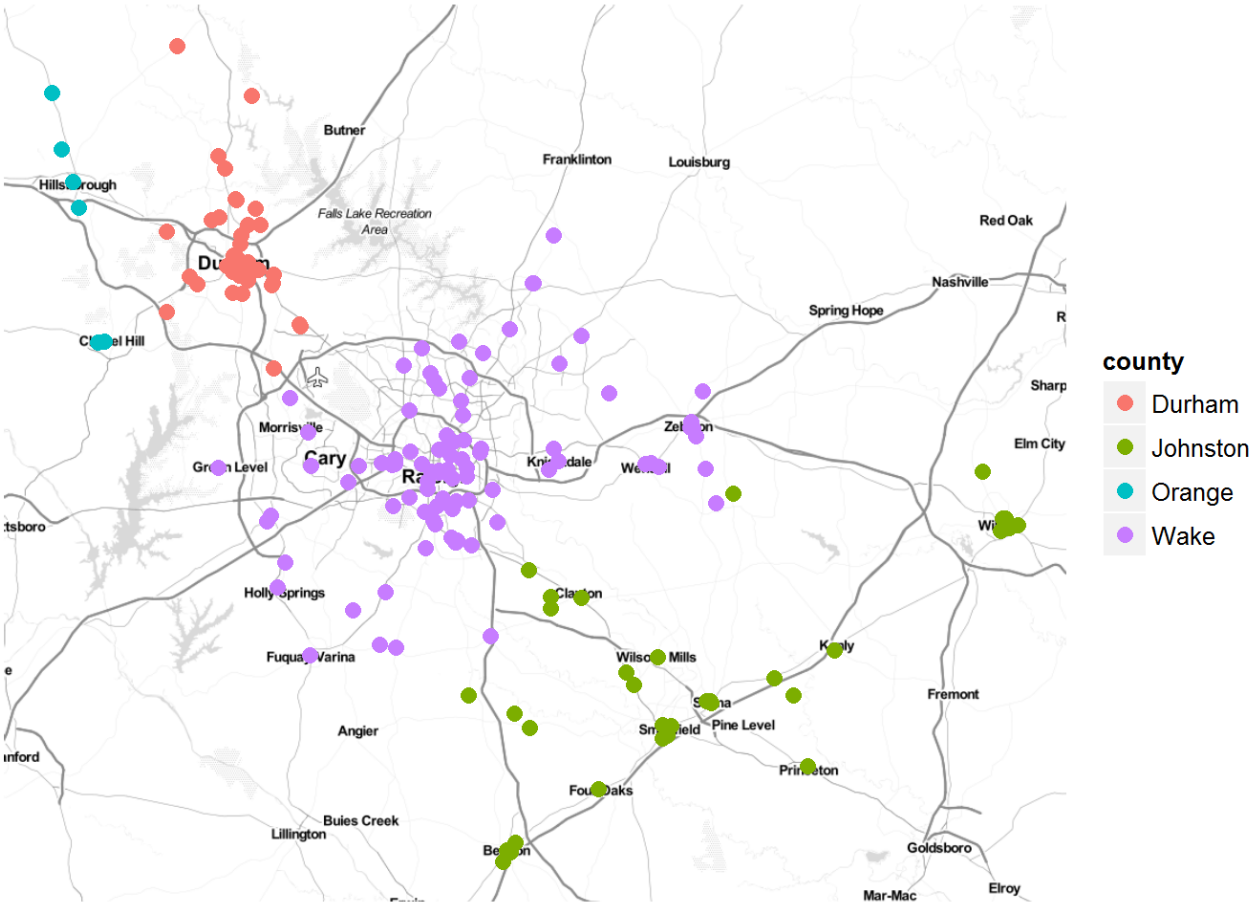
```
##     County Food Pantry With Bus Service % Bus Service
## 1   Durham          39               37      94.87179
## 2   Orange           6                4      66.66667
## 3     Wake          91               45      49.45055
## 4 Johnston          33                0       0.00000
```

```
pantry<-subset(pantry,county=c("Wake","Orange","Durham"))
#Adding an extra field "Category" in both data frames

pantry$category <- "Pantry"
bus_stop$category <- "BusStop"


#Subsetting both data frames for longitude, Latitude and their category

pantry_subset <- subset(pantry, select=c(lon,lat,category))
#Changing Column names in pantries_busstop
names(pantry_subset) <- c("lon","lat","category")
busstop_subset <- subset(bus_stop, select=c(location.lng,location.lat,category)
)
#Changing Column names in pantries_busstop
names(busstop_subset) <- c("lon","lat","category")

# Combining pantries subset and busstops_subset in one Data Frame pantries_buss
top
pantries_busstop <- rbind(pantry_subset,busstop_subset)
```

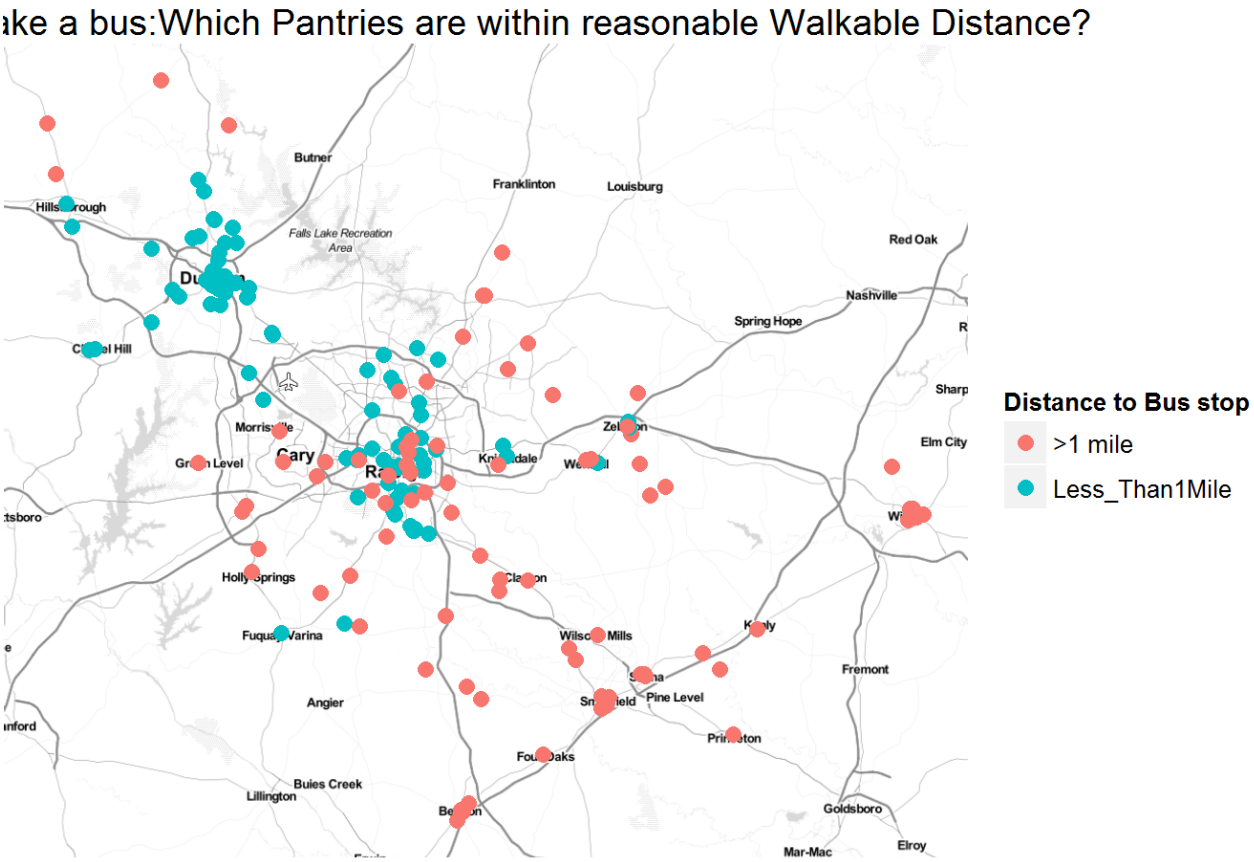
```
library(ggmap)
qmplot(lon,lat,data = pantries_busstop,colour=category)
```



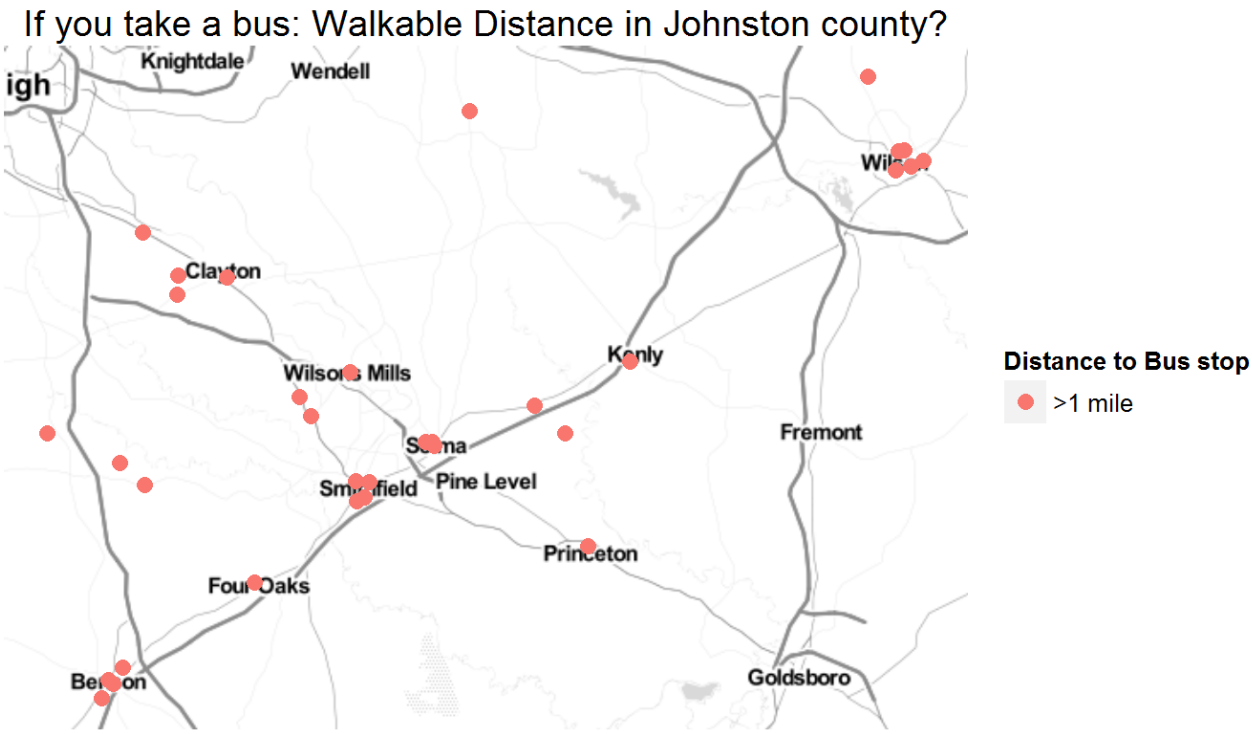

```
qmplot(lon,lat,data=pantry,color=county,size=I(3))
```


Butner
Franklinton
Louisburg
Falls Lake Recreation Area
Red Oak
Nashville
Spring Hope
Elm City
Cary
Holly Springs
Fuquay-Varina
Wilson Mills
Pine Level
Fremont
Angier
Princeton
Buies Creek
Lillington
Goldsboro
Elroy
Mar-Mac
county
Durham
Johnston
Orange
Wake

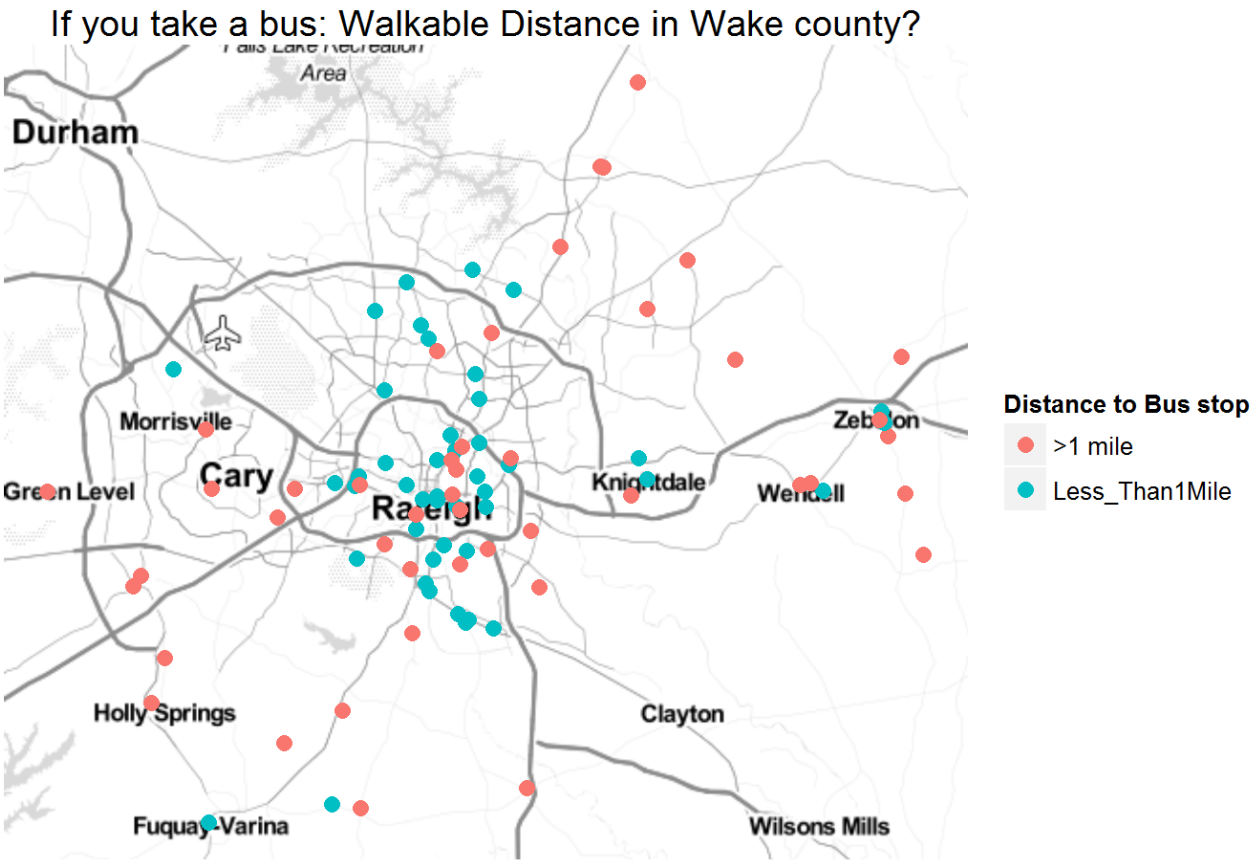
```
pantryies <- read.csv(file="pantryies.csv",head=TRUE,sep=",")
bustops <- bus_stop
pantriesBus <-  read.csv(file="distances_pantries_to_busstop.csv",head=TRUE,sep
=",")
# Rename column name
bustops$lat <- dplyr::select(bustops, lat=location.lat )
bustops$lon <- dplyr::select(bustops, lon=location.lng )
df2 <- dplyr::select(pantryies,lat,lon)
df3 <- dplyr::select(bustops,lat,lon)



#
# qmplot(lon, lat, data = pantryies, colour = "red", size = I(3))
#
# qmplot(lon, lat, data = bustops, colour ="blue" , size = I(3))
# qmplot(pantry_lon, pantry_lat, data = pantriesBus, colour = "red", size = I(3
))
#
# qmplot(lon, lat, data = pantryies, colour =Less_Than1Mile, size = I(3))

# All County only
qmplot(lon, lat, data = pantryies, color=Distance_To_BusStop,
       size = I(3)) + scale_color_discrete(name="Distance to Bus stop") +
  ggtitle("If you take a bus:Which Pantries are within reasonable Walkable Dist
ance?")
```



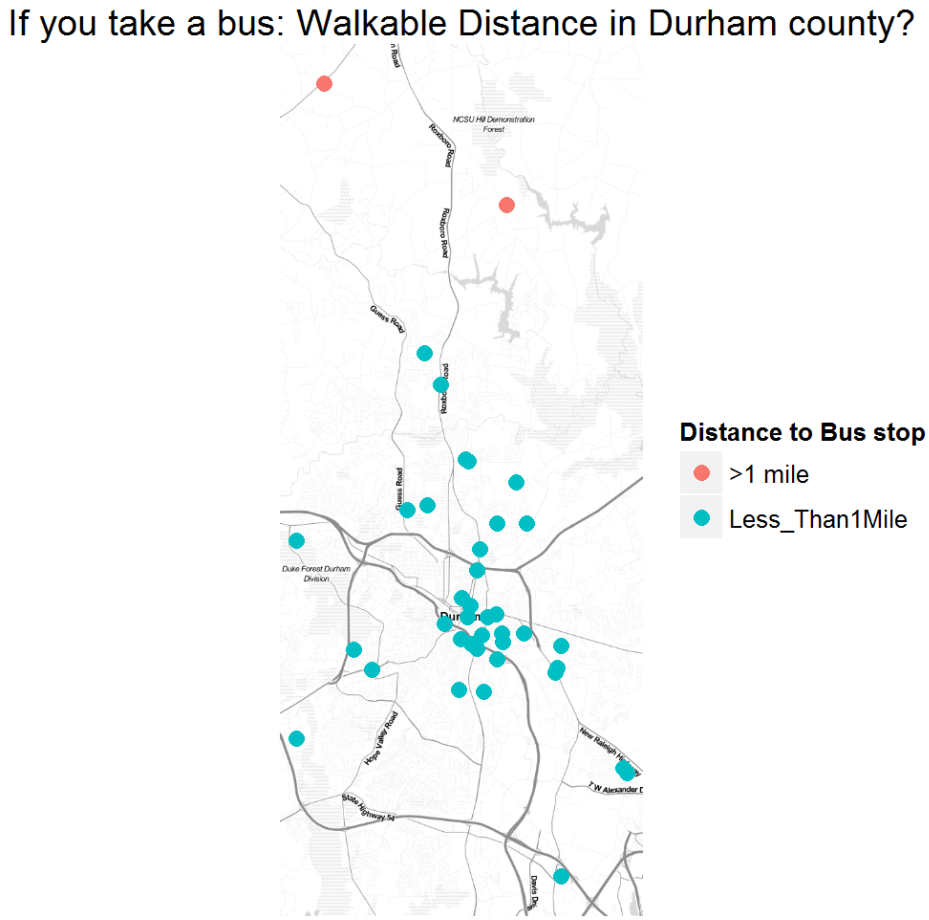

```
# Johnson County only
qmplot(lon, lat, data = dplyr::filter(pantryies, county=="Johnston"), color=Dis
tance_To_BusStop,
       size = I(3)) + scale_color_discrete(name="Distance to Bus stop") +
  ggtitle("If you take a bus: Walkable Distance in Johnston county?")
```




```
# Wake County only
qmplot(lon, lat, data = dplyr::filter(pantryies, county=="Wake"), color=Distanc
e_To_BusStop,
       size = I(3)) + scale_color_discrete(name="Distance to Bus stop") +
  ggtitle("If you take a bus: Walkable Distance in Wake county?")
```




```
# Durham County only
qmplot(lon, lat, data = dplyr::filter(pantryies, county=="Durham"), color=Dista
nce_To_BusStop,
       size = I(3)) + scale_color_discrete(name="Distance to Bus stop") +
  ggtitle("If you take a bus: Walkable Distance in Durham county?")
```




```
qmplot(lon, lat, data = dplyr::filter(pantryies, county=="Orange"), color=Dista
nce_To_BusStop,
       size = I(3)) + scale_color_discrete(name="Distance to Bus stop") +
  ggtitle("If you take a bus: Walkable Distance in Orange county?")
```

If you take a bus: Walkable Distance in Orange county?