Project

```r
library(tidyverse)
```

```r
food <- readr::read_csv("data/Food_Supply_kcal_Data.csv")
```

```r
food <- food %>%
  mutate(income = ifelse(Country %in% c("Afghanistan","Burkina Faso", "Central African Republic", "Chad"
                         ifelse(Country %in% c("Algeria","Angola","Bangladesh", "Belize", "Benin", "Bol
Pakistan", "Samoa", "Sao Tome and Principe", "Senegal", "Solomon Islands","Sri Lanka", "Suriname", "Taj
                         ifelse(Country %in% c("Albania","Argentina","Armenia","Azerbaijan", "Belarus",
Panama", "Paraguay", "Peru", "Philippines", "Republic of Moldova", "Romania", "Russian Federation", "Sa
              "UMIC", "HIC"))))
```

```r
food <- food %>%
  mutate(Grains = `Cereals - Excluding Beer` + `Starchy Roots`) %>%
  mutate(Vegetables2 = Pulses + `Vegetal Products` + Vegetables) %>%
  mutate(Fruits = `Fruits - Excluding Wine`) %>%
  mutate(Fats = `Animal fats` + Oilcrops + Treenuts + `Vegetable Oils`) %>%
  mutate(Protein = `Animal Products` + Eggs + `Fish, Seafood` + Meat + `Milk - Excluding Butter` + Offa
  mutate('Alcohol/Stimulants' = `Alcoholic Beverages` + Stimulants) %>%
  mutate(Other = `Aquatic Products, Other` + Miscellaneous + Spices + `Sugar Crops` + `Sugar & Sweetener
```

```r
meanfood <- food %>%
  summarize(meangrains = mean(Grains), meanveg = mean(Vegetables2), meanfruit = mean(Fruits), meanfat =
```
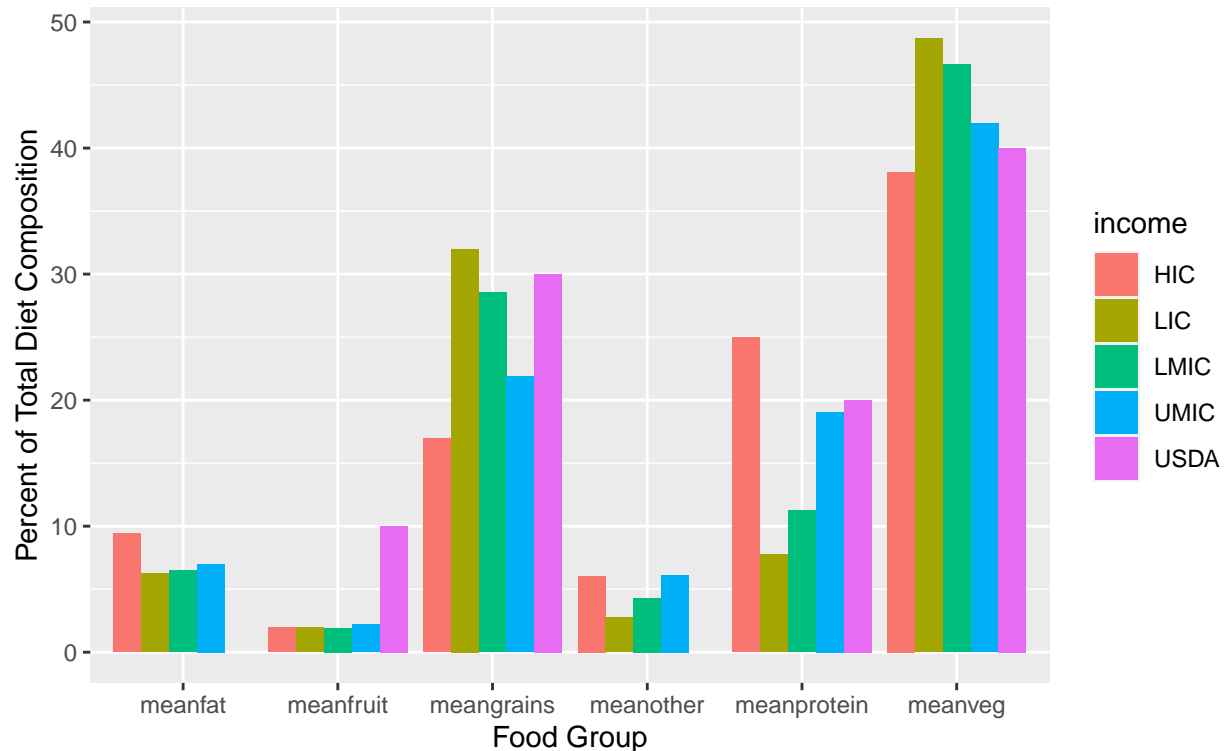
```r
meanfoodincome <- food %>%
  group_by(income) %>%
  summarize(meangrains = mean(Grains), meanveg = mean(Vegetables2), meanfruit = mean(Fruits), meanfat =
  add_row(income="USDA", meangrains=30, meanveg=40, meanfruit=10, meanprotein=20) %>%
  pivot_longer(cols=meangrains:meanother, names_to = "Means", values_to = "PercentDiet")
```

```r
ggplot(data=meanfoodincome, aes(x=Means, y=PercentDiet, fill=income))+geom_col(position="dodge") + labs
```

```
## Warning: Removed 2 rows containing missing values (geom_col).
```

Diet Make up by Food Group
broken down by income category and compared to USDA suggested diet


```
tfood<-food %>%
  group_by(income) %>%
  summarize(meangrains = mean(Grains), meanveg = mean(Vegetables2), meanfruit = mean(Fruits), meanfat =
  add_row(income="USDA", meangrains=30, meanveg=40, meanfruit=10, meanprotein=20)

t.test(tfood$meangrains, mu=30)
```

```
##
##  One Sample t-test
##
## data:  tfood$meangrains
## t = -1.4716, df = 4, p-value = 0.2151
## alternative hypothesis: true mean is not equal to 30
## 95 percent confidence interval:
##  18.07790 33.66202
## sample estimates:
## mean of x
##  25.86996
```

```
t.test(tfood$meanveg, mu=40)
```

```
##
##  One Sample t-test
##
## data:  tfood$meanveg
## t = 1.5442, df = 4, p-value = 0.1974
## alternative hypothesis: true mean is not equal to 40
```

```
## 95 percent confidence interval:
##  37.54112 48.62143
## sample estimates:
## mean of x
##  43.08128
```

```
t.test(tfood$meanfruit, mu=10)
```

```
##
##  One Sample t-test
##
## data:  tfood$meanfruit
## t = -3.9977, df = 4, p-value = 0.01616
## alternative hypothesis: true mean is not equal to 10
## 95 percent confidence interval:
##  -0.8396244  8.0458676
## sample estimates:
## mean of x
##  3.603122
```

```
t.test(tfood$meanprotein, mu=20)
```

```
##
##  One Sample t-test
##
## data:  tfood$meanprotein
## t = -1.0876, df = 4, p-value = 0.3379
## alternative hypothesis: true mean is not equal to 20
## 95 percent confidence interval:
##   7.929318 25.275509
## sample estimates:
## mean of x
##  16.60241
```

```
summary(aov(meangrains~income,data=tfood))
```

```
##             Df Sum Sq Mean Sq
## income       4  157.5   39.38
```

```
#ggplot(food, aes(x = Grains, Vegetables, Fruits, Fats, Protein)) + geom_bar()
```

```
“‘
```