Assignment 1

Claudia Escorcia

Due November 15th

For this assignment, you will be creating a visualization that will enhance the data summaries displayed on the Leanpath platform. Leanpath currently displays four primary graphs under the Food Waste Dashboard: Top Wasted Foods, Top Loss Reasons, Waste by Day of Week, and Waste Trend. While these provide general insights that can be helpful for dining hall managers, we can further inspect this data for our personal use.

Be creative and impactful when developing your graphs. For example, I built off the Cafe 3's Waste by Week bar graph by taking the average waste per day across the month of October and adding the division of food categories per day. This data can be applied to better mitigation of food waste reduction efforts as we can advise dining hall managers to reduce the number of a certain food group served on a certain week day if the trend is consistent over time.

If you are stuck on where to start, some areas to analyze include: meal periods (refer to Berkeley Dining operational hours), changes in waste for certain food groups over time, or expand the code I created for another dining common.

If you need additional support, please email Natalie at nataliesnchz@berkeley.edu

Leanpath Login Information

Leanpath Website

Username: scasey92@berkeley.edu

Password: Wtfairbears5445!

Question 1

In 2-4 sentences, please describe what you are choosing to focus on and the significance of these results to food waste reduction.

I am choosing to focus on the food item categories that are wasted at each dining common. Specifically, I want my visualization to show the proportion of which food items are wasted in each dining common to determine if there are certain food items that are more wasted at each location. This is important for food waste reduction because we can recommend to dining hall managers to produce less of a certain food item category if it is consistently getting wasted disproportionately more. The data I collected is from the last 7 days.

Import Packages

```
library(tidyverse)
library(ggthemes)
```

Import Data

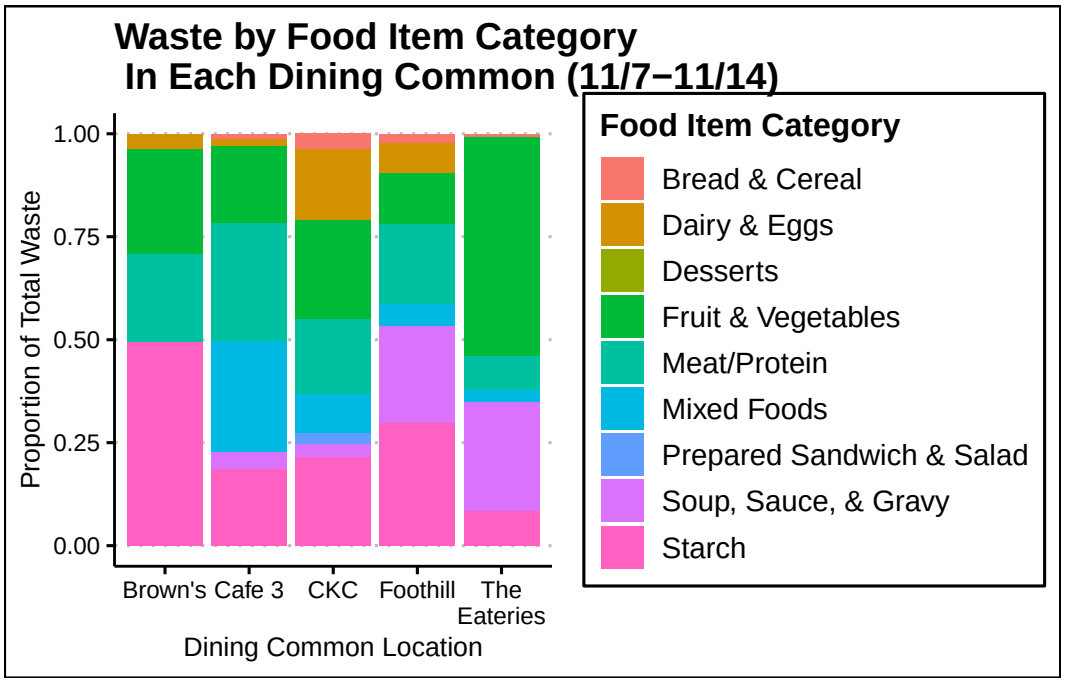
```
waste <- read_csv("https://raw.githubusercontent.com/c-escorcia/Leanpath-Data/refs/heads/mai
```

Coding Space

Below is where you will primarily be working for this assignment. The first code chunk is my data set you all can refer to if needed, and the second code chunk is where you will be inputting your data.

```
# Claudia's Code
waste |>
  mutate(total_weight = Quantity * Weight) |>
  ggplot(aes(x = Location,
             y = total_weight,
             fill = Food_Item_Category))+
  geom_col(position = "fill")+
  scale_x_discrete(labels = label_wrap_gen(10))+
  scale_fill_discrete(labels = c("Bread & Cereal",
                                 "Dairy & Eggs", "Desserts",
                                 "Fruit & Vegetables",
```

```
                                "Meat/Protein", "Mixed Foods",
                                "Prepared Sandwich & Salad",
                                "Soup, Sauce, & Gravy", "Starch"))+
  labs(title =
      "Waste by Food Item Category \n In Each Dining Common (11/7-11/14)",
       x = "Dining Common Location",
       y = "Proportion of Total Waste",
       fill = "Food Item Category")+
  theme_clean()
```



Question 2

What did your results find? How can this be useful for future food recovery efforts? (2-5 sentences)

My results show that the food item category that is the most wasted varies at each location. For example, about 50% of the food waste at Brown's are starch items but more than 50% of the food waste at the Eateries are fruit and vegetables. This can be useful for future food recovery efforts because we can investigate why certain food items are being wasted more at each location and suggest strategies to reduce waste in that specific category.

Output

After you complete your code and have a generated graph/visual representation, be sure to export the codespace as a pdf. A visual demonstration is provided in the video sent by Natalie, but here are the general steps: click the elipses in the tabs bar > export > pdf. It will take a second for the pdf to generate, but it will appear in the left plane and you can download the pdf to your computer from there.

After the pdf is downloaded, please email Natalie.