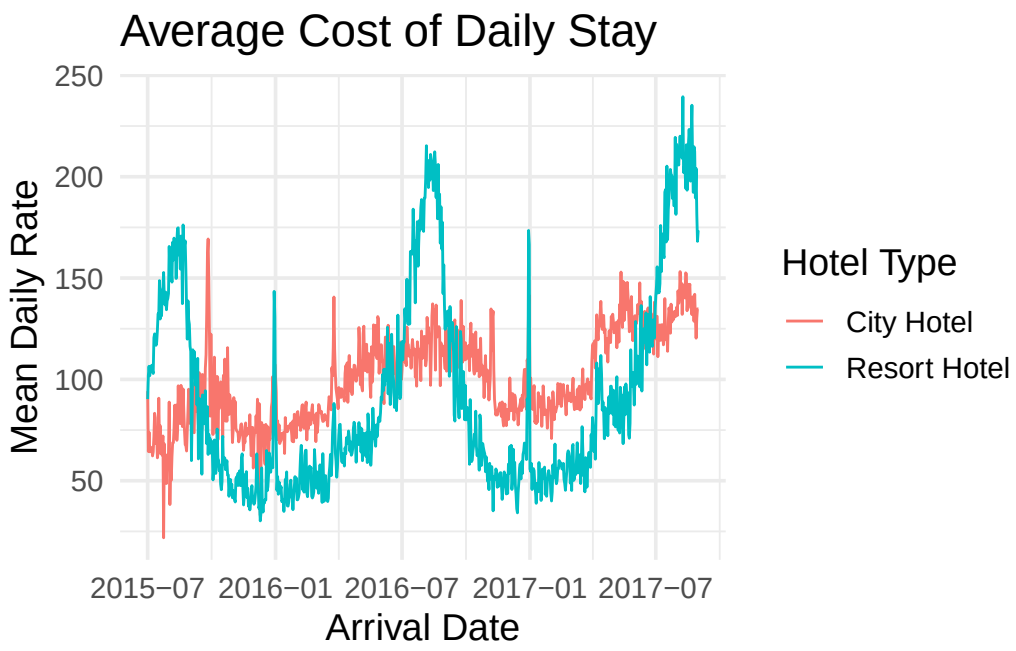
AE 5

Brandon Leslie

Part 1

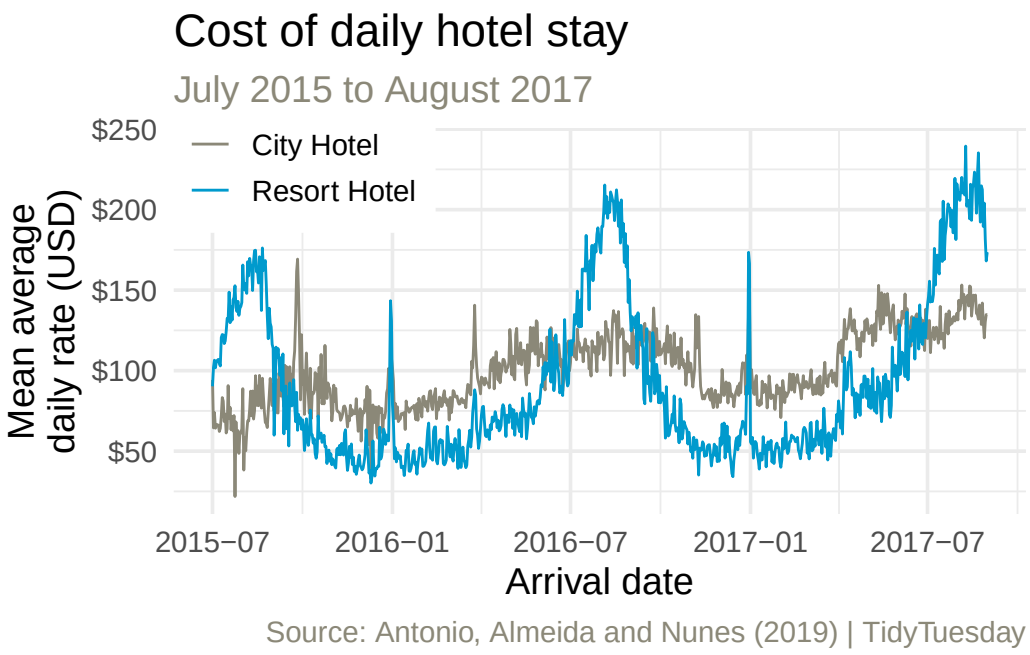
```
hotels %>%
mutate(
arrival_date = glue::glue("{arrival_date_year}-{arrival_date_month}-
                          {arrival_date_day_of_month}"), arrival_date =
  ymd(arrival_date)) %>%
group_by(hotel, arrival_date) %>%
summarize(mean_daily_rate = mean(adr), .groups = "drop") %>%
ggplot(aes(x = arrival_date, y = mean_daily_rate)) +
geom_line(aes(color = hotel)) +
labs(
x = "Arrival Date",
y = "Mean Daily Rate",
color = "Hotel Type",
title = "Average Cost of Daily Stay"
)
```




```
hotels |>
  mutate(
    arrival_date = glue::glue("{arrival_date_year}-{arrival_date_month}-
                              {arrival_date_day_of_month}"),
    arrival_date = ymd(arrival_date)
  ) |>
  group_by(hotel, arrival_date) |>
  summarise(mean_adr = mean(adr), .groups = "drop") |>
  ggplot(aes(x = arrival_date, y = mean_adr, group = hotel, color = hotel)) +
  geom_line() +
  scale_color_manual(values = c("cornsilk4", "deepskyblue3")) +
  scale_y_continuous(labels = label_dollar()) +
  labs(
    x = "Arrival date",
    y = "Mean average\ndaily rate (USD)",
    color = NULL,
    title = "Cost of daily hotel stay",
    subtitle = "July 2015 to August 2017",
    caption = "Source: Antonio, Almeida and Nunes (2019) | TidyTuesday"
  ) +
  theme(
    legend.position  = c(0.15, 0.9),
    legend.box.background = element_rect(
      fill = "white",
```

```
      color = "white"
    ),
    plot.subtitle = element_text(color = "cornsilk4"),
    plot.caption = element_text(color = "cornsilk4")
  )
```

```
Warning: A numeric `legend.position` argument in `theme()` was deprecated in ggplot2
3.5.0.
i Please use the `legend.position.inside` argument of `theme()` instead.
```

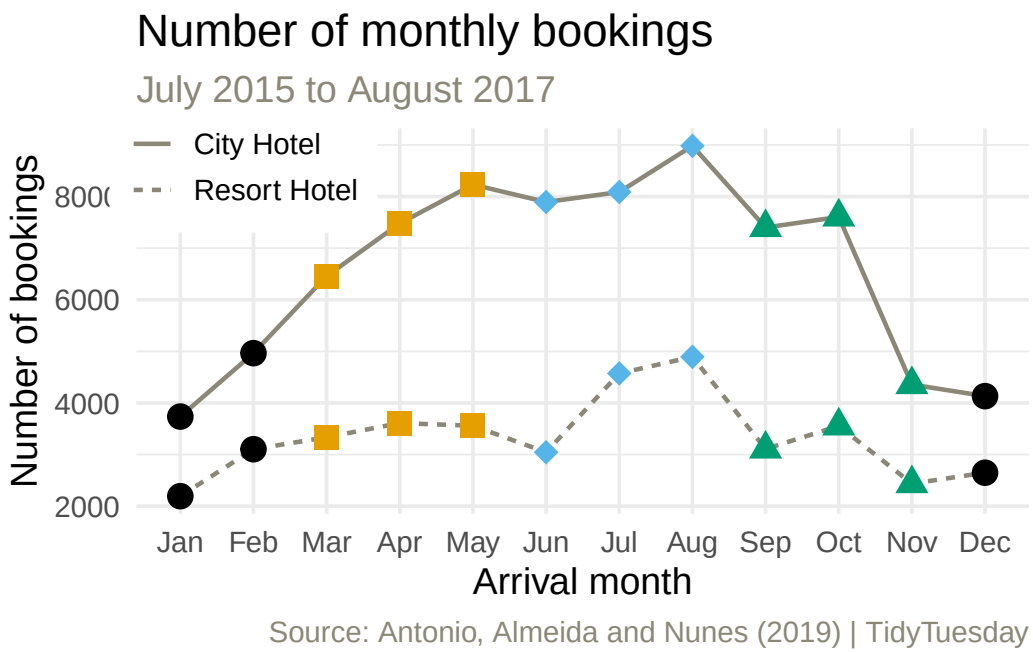


Part Two

```
hotels <- hotels %>%
  mutate(
    arrival_date_month = fct_relevel(arrival_date_month, month.name),
    season = case_when(
      arrival_date_month %in% c("December", "January", "February") ~ "Winter",
      arrival_date_month %in% c("March", "April", "May") ~ "Spring",
      arrival_date_month %in% c("June", "July", "August") ~ "Summer",
      TRUE ~ "Fall"
    ),
```

```
    season = fct_relevel(season, "Winter", "Spring", "Summer", "Fall")
  )
```

```
hotels %>%
  count(season, hotel, arrival_date_month) |>
  ggplot(aes(x = arrival_date_month, y = n, group = hotel, linetype = hotel)) +
  geom_line(linewidth = 0.8, color = "cornsilk4") +
  geom_point(aes(shape = season, color = season), size = 4, show.legend = FALSE) +
  scale_x_discrete(labels = month.abb) +
  scale_color_colorblind() +
  scale_shape_manual(values = c("circle", "square", "diamond", "triangle")) +
  labs(
    x = "Arrival month", y = "Number of bookings", linetype = NULL,
    title = "Number of monthly bookings",
    subtitle = "July 2015 to August 2017",
    caption = "Source: Antonio, Almeida and Nunes (2019) | TidyTuesday"
  ) +
  coord_cartesian(clip = "off") +
  theme(
    legend.position = c(0.12, 0.9),
    legend.box.background = element_rect(fill = "white", color = "white"),
    plot.subtitle = element_text(color = "cornsilk4"),
    plot.caption = element_text(color = "cornsilk4")
  )
```


Number of monthly bookings
July 2015 to August 2017
City Hotel
Resort Hotel
Number of bookings
800(
6000
4000
2000
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Arrival month
Source: Antonio, Almeida and Nunes (2019) | TidyTuesday