

# Sociology Quant Camp

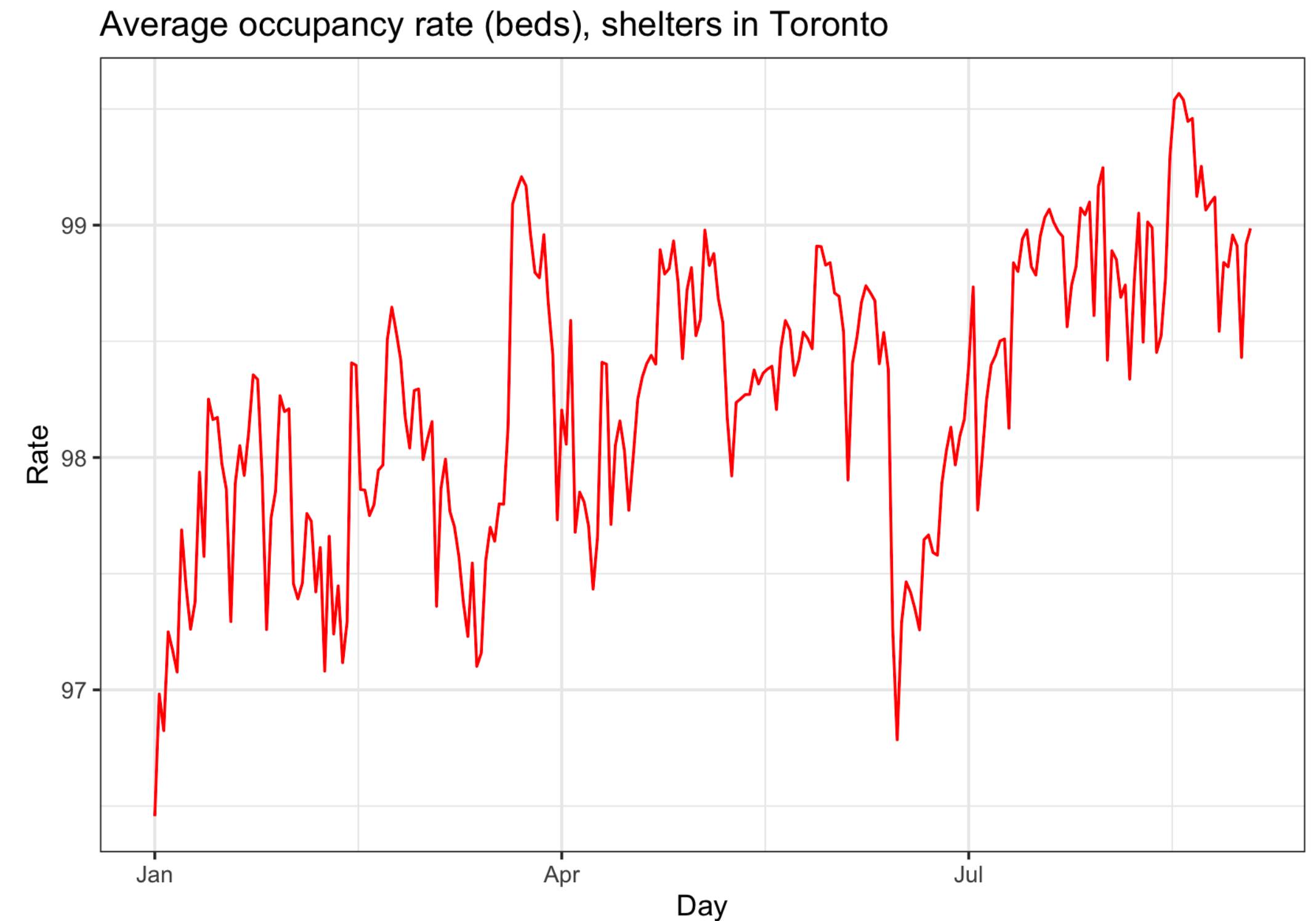
Introduction to R

Module 3: intro to ggplot

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# Using ggplot to plot your data

- ggplot is the graphing package that goes with the tidyverse in R
- Very powerful to make a wide range of graphics
- ggplot code works in layers, with each layer adding complexity
  - Define data and variables
  - Add on the type of plot
  - Scales
  - Themes, fonts, colors



What we'll build up to!

# Preliminaries

- Calculate averages by day

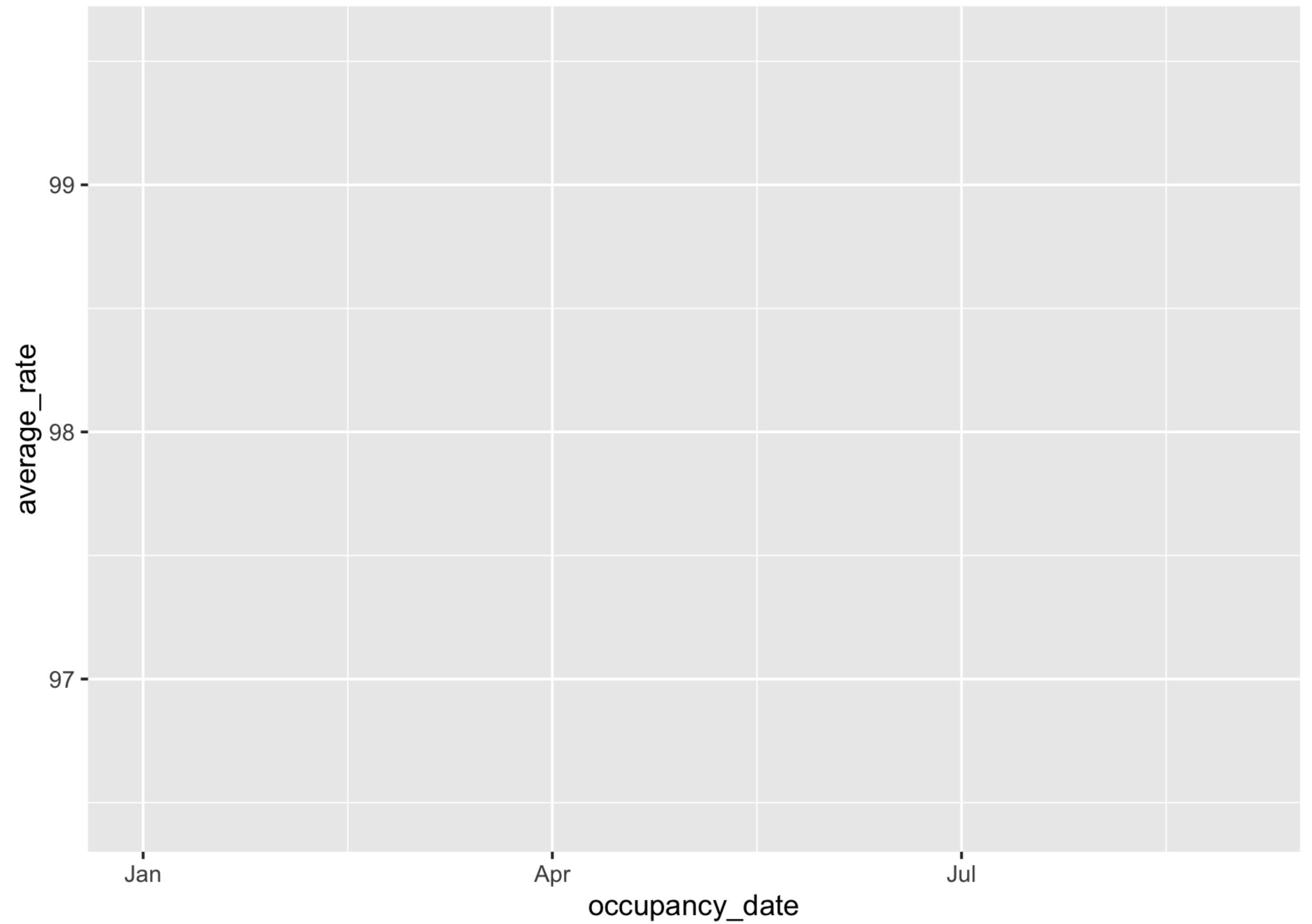
```
drs <- dr |>  
  group_by(occupancy_date) |>  
  summarize(average_rate = mean(occupancy_rate_beds, na.rm = TRUE))
```

# A blank canvas

```
ggplot(data = drs, aes(occupancy_date, average_rate))
```

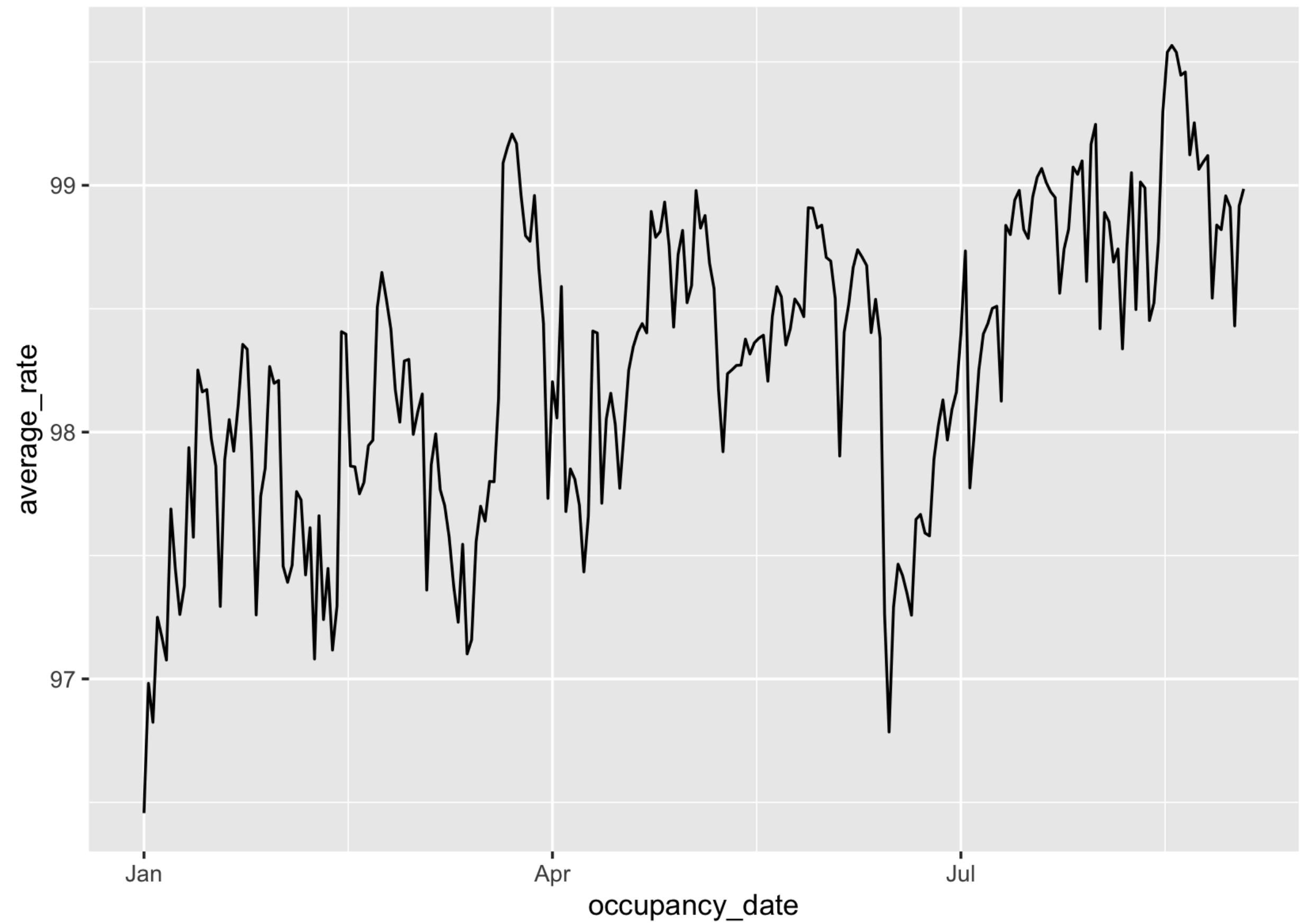
Data

Aesthetics



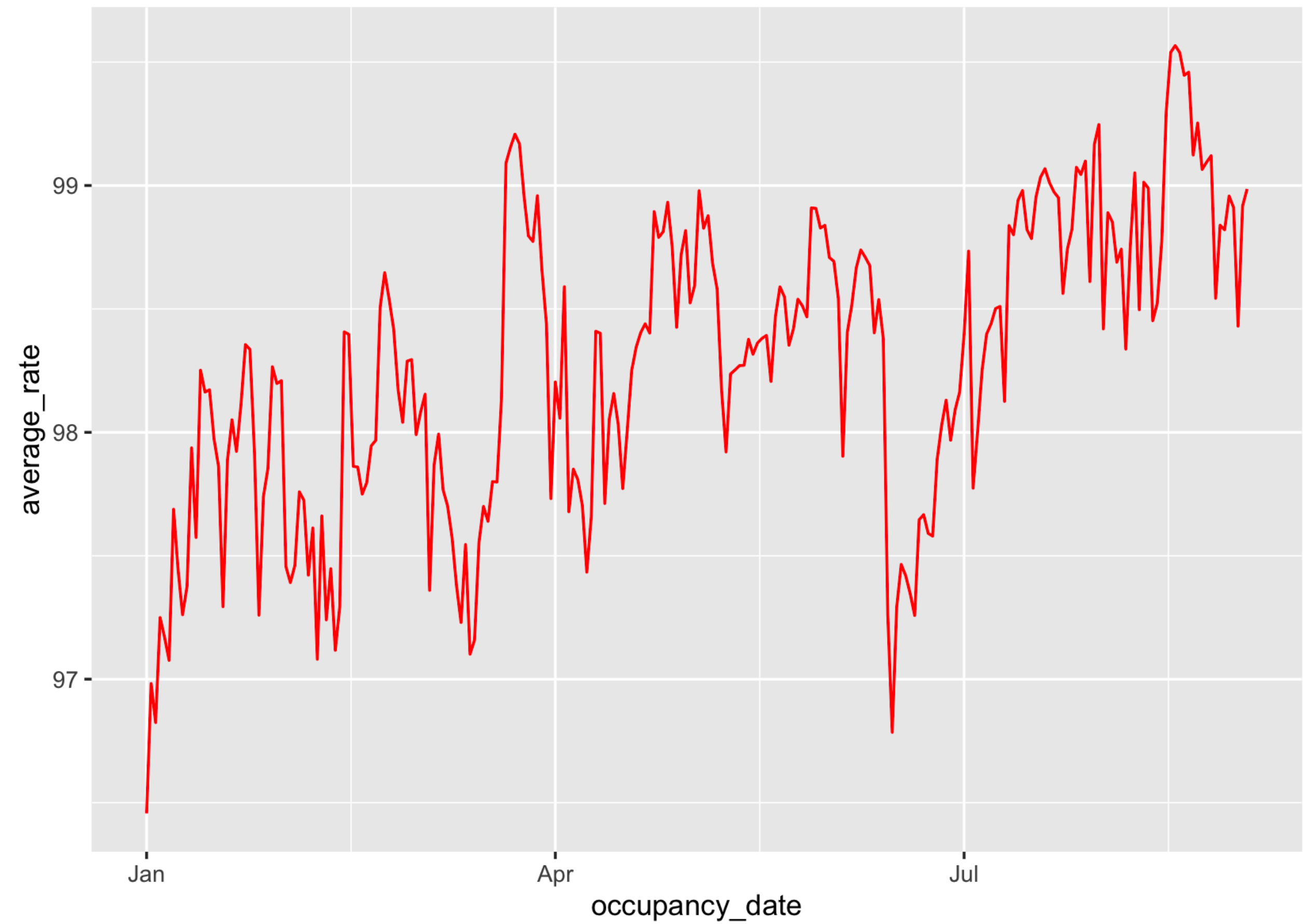
# Add a type

```
ggplot(data = drs, aes(occupancy_date, average_rate)) +  
  geom_line()
```



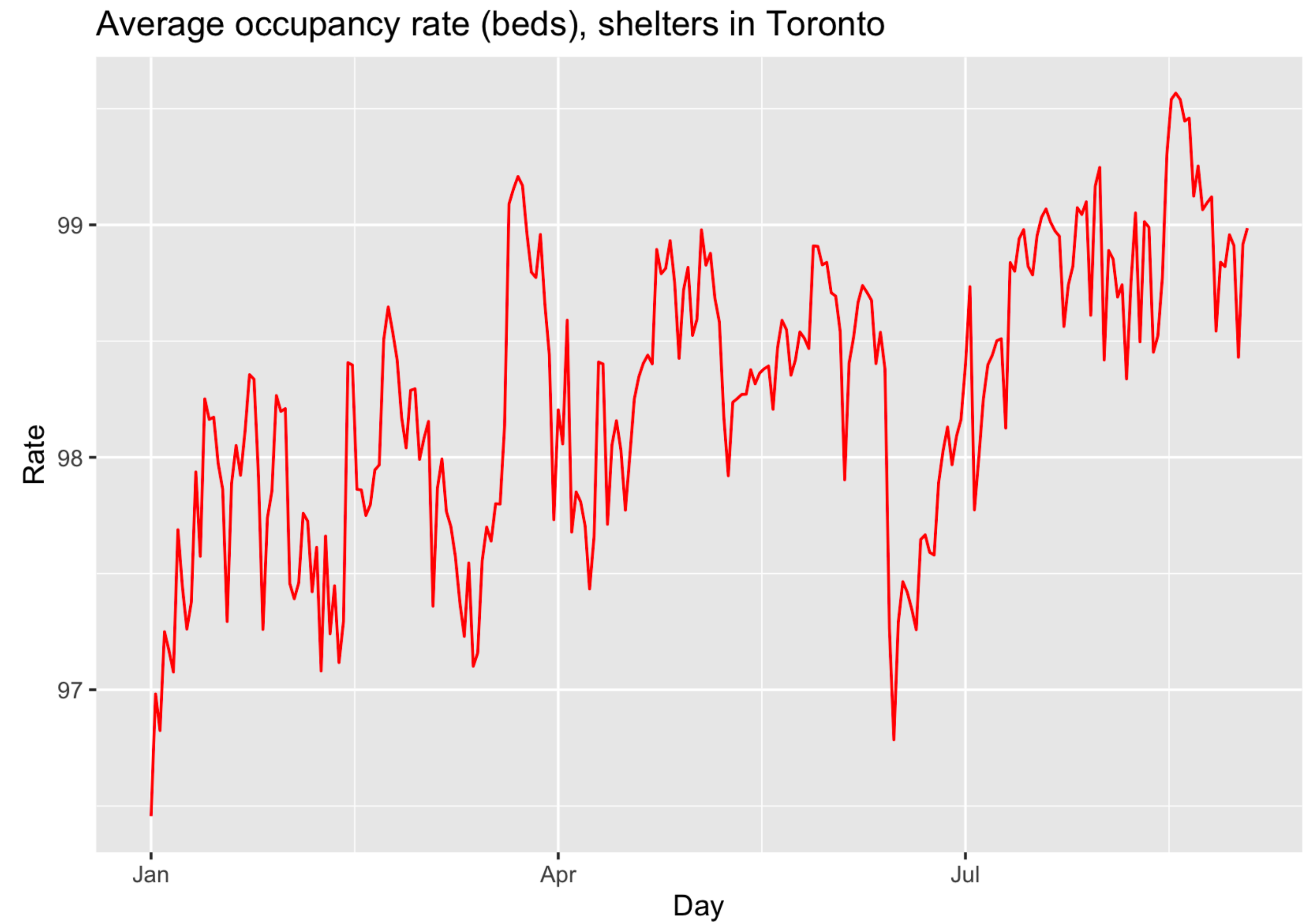
# Change color

```
ggplot(data = drs, aes(occupancy_date, average_rate)) +  
  geom_line(color = "red")
```



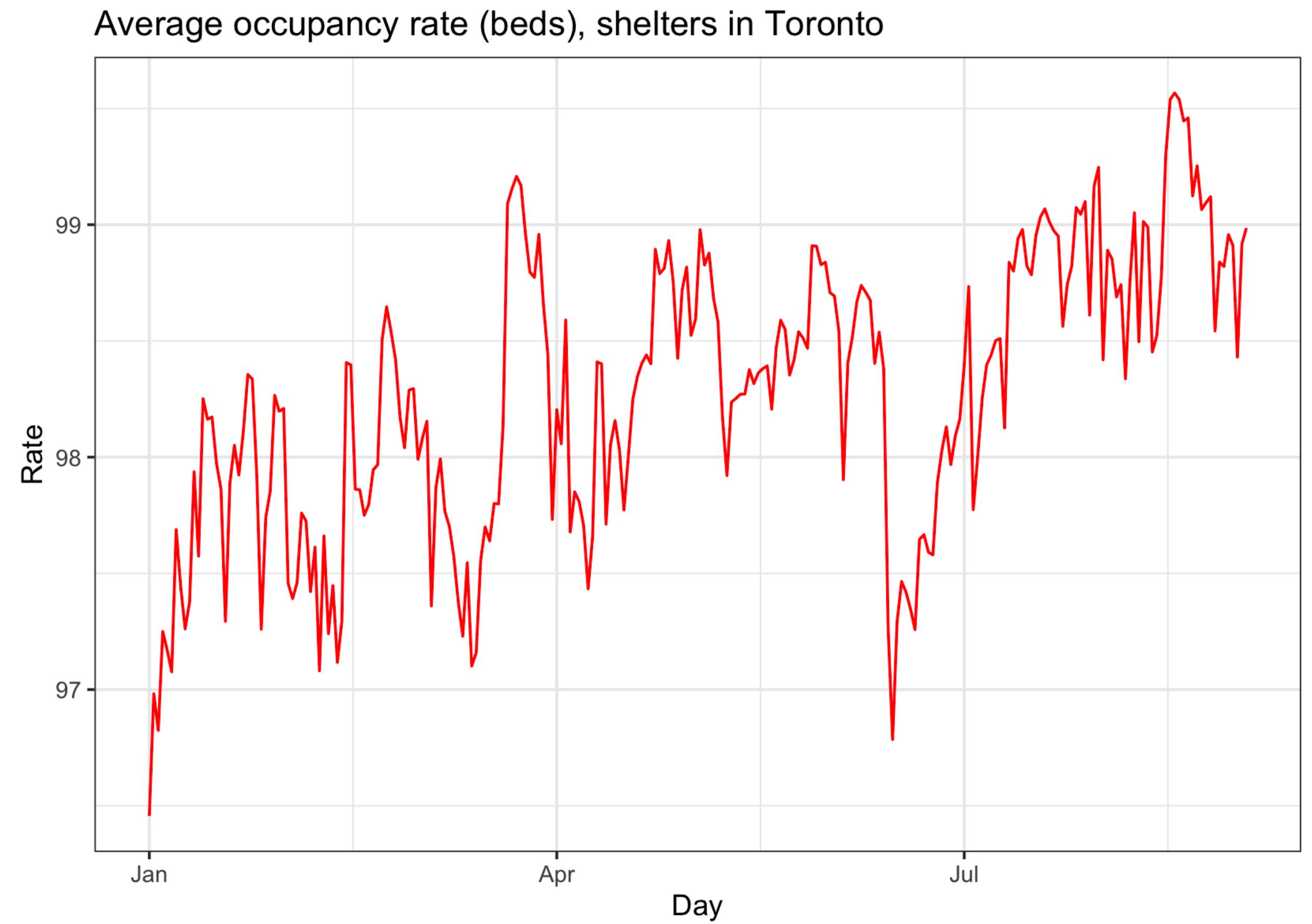
# Labels

```
ggplot(data = drs, aes(occupancy_date, average_rate)) +  
  geom_line(color = "red")+  
  labs(title = "Average occupancy rate (beds), shelters in Toronto",  
        x = "Day",  
        y = "Rate")
```



# Theme

```
ggplot(data = drs, aes(occupancy_date, average_rate)) +  
  geom_line(color = "red")+  
  labs(title = "Average occupancy rate (beds), shelters in Toronto",  
        x = "Day",  
        y = "Rate")+  
  theme_bw()
```





**Demo: more ggplot**

# Where to get help

- Lots of good, free online sources
  - R for Data Science: <https://www.tidyverse.org/learn/>
  - Telling stories with data: <https://tellingstorieswithdata.com/>
  - Tidyverse skills for data science: <https://jhudatascience.org/tidyversecourse/intro.html>
- Google/Stack Overflow
- Email
- Practice, practice, practice; don't be afraid of mistakes