City of Los Angeles - 2020 to Present

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```
la_crime <- read_csv("/Users/ed/Downloads/Crime_Data_from_2020_to_Present.csv")

la_crime$Year <- year(mdy_hms(la_crime$'DATE OCC'))

names(la_crime)[names(la_crime) == "Date Rptd"] <- "Date Reported"
names(la_crime)[names(la_crime) == "DATE OCC"] <- "Date Occurred"
names(la_crime)[names(la_crime) == "TIME OCC"] <- "Time Occurred"
names(la_crime)[names(la_crime) == "AREA"] <- "Area"
names(la_crime)[names(la_crime) == "LAT"] <- "Latitude"
names(la_crime)[names(la_crime) == "LON"] <- "Longitude"
names(la_crime)[names(la_crime) == "Crm Cd Desc"] <- "Crime"
```

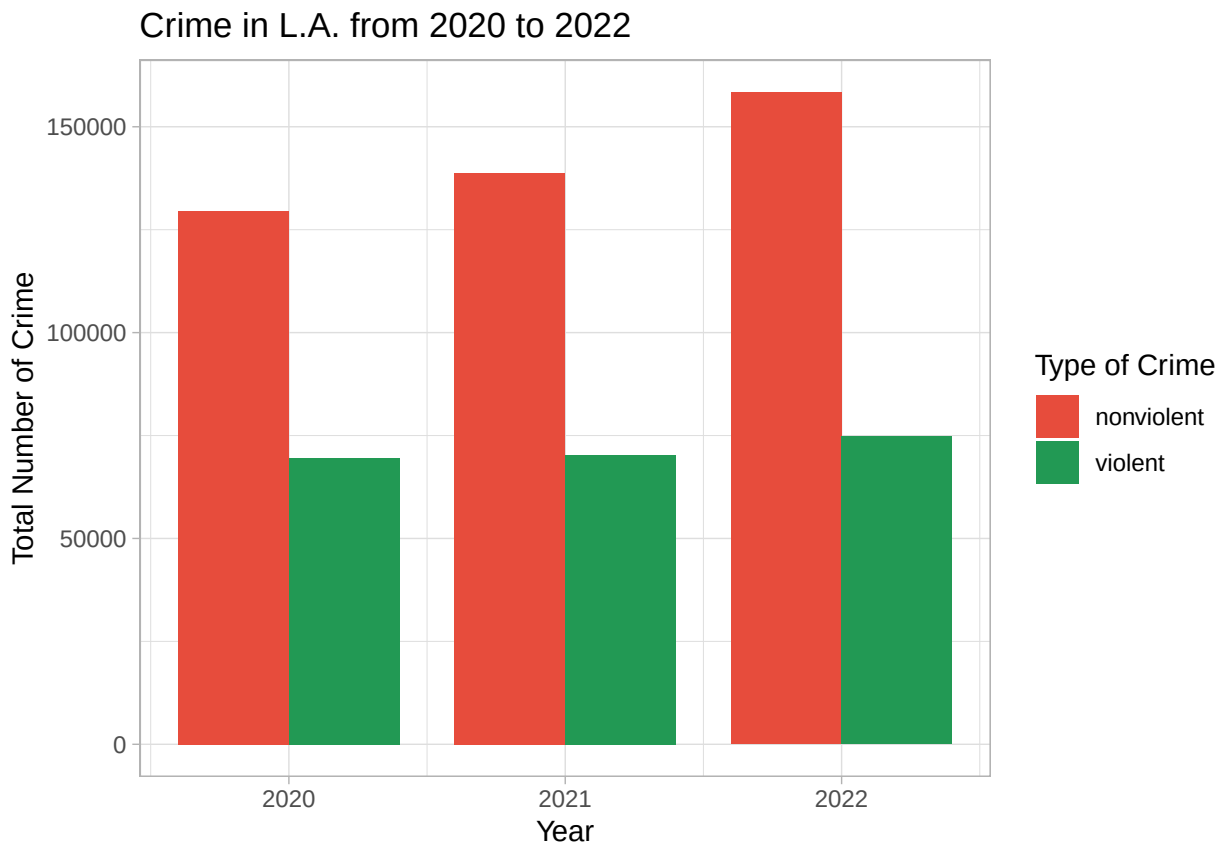
```
la_crime <- la_crime %>%
  mutate(category = ifelse(
    Crime %in% c("BATTERY - SIMPLE ASSAULT", "RAPE, FORCIBLE", "ARSON","INTIMATE PARTNER - SIMPLE ASSAU
"KIDNAPPING","SODOMY/SEXUAL CONTACT B/W PENIS OF ONE PERS TO ANUS OTH", "CHILD ABUSE (PHYSICAL) - SIMPL
"BEASTIALITY, CRIME AGAINST NATURE SEXUAL ASSLT WITH ANIM", "INCITING A RIOT"), "violent", "nonviolent"
```

```
crime_summary <- la_crime %>%
  group_by(Year, category) %>%
  summarise(count = n()) %>%
  filter(Year != 2023) %>%
  filter(Year %% 1 == 0)
```

```
## `summarise()` has grouped output by 'Year'. You can override using the
## `.groups` argument.
```

```
# crime_counts <- la_crime %>% group_by(category, Year) %>% summarise(count = n())

ggplot(crime_summary, aes(x = Year, y = count, fill = category)) +
  geom_bar(position = "dodge", stat = "identity", width = .8) +
  scale_fill_manual(values = c("#E74C3C", "#229954")) +
  theme_light() +
  labs(title = "Crime in L.A. from 2020 to 2022", y = "Total Number of Crime", x = "Year", fill = "Type
  scale_x_continuous(breaks = seq(2020, 2023, 1)) +
  theme(legend.position = "right")
```

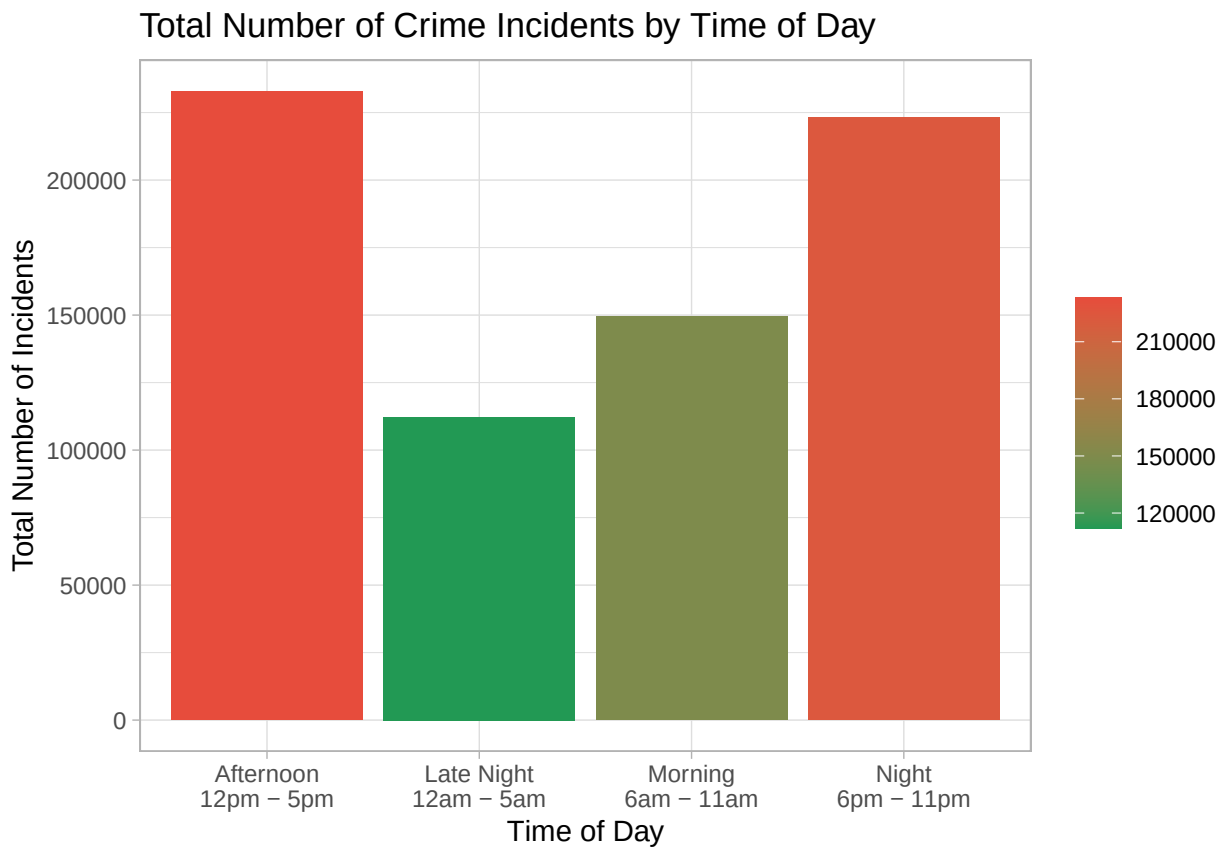



```
la_crime$'Time Occurred' <- strptime(la_crime$`Time Occurred`, format ='%H%M')

la_crime <- la_crime %>%
  mutate(Time_Class = case_when(
    between(hour(`Time Occurred`), 6, 11) ~ "Morning",
    between(hour(`Time Occurred`), 12, 17) ~ "Afternoon",
    between(hour(`Time Occurred`), 18, 23) ~ "Night",
    TRUE ~ "Late Night"))

crime_counts <- la_crime %>%
  count(Time_Class)

ggplot(crime_counts, aes(x = Time_Class, y = n, fill = n)) +
  geom_bar(stat = "identity") +
  scale_fill_gradient(low = "#229954", high = "#E74C3C") +
  labs(title = "Total Number of Crime Incidents by Time of Day",
       x = "Time of Day",
       y = "Total Number of Incidents",
       fill = NULL) +
  scale_x_discrete(labels = c("Morning" = "Morning\n6am - 11am",
                              "Afternoon" = "Afternoon\n12pm - 5pm",
                              "Night" = "Night\n6pm - 11pm",
                              "Late Night" = "Late Night\n12am - 5am")) + theme_light()
```


Total Number of Crime Incidents by Time of Day
Total Number of Incidents
200000
150000
100000
50000
0
Afternoon
12pm − 5pm
Late Night
12am − 5am
Morning
6am − 11am
Night
6pm − 11pm
Time of Day
210000
180000
150000
120000