# test-pdf

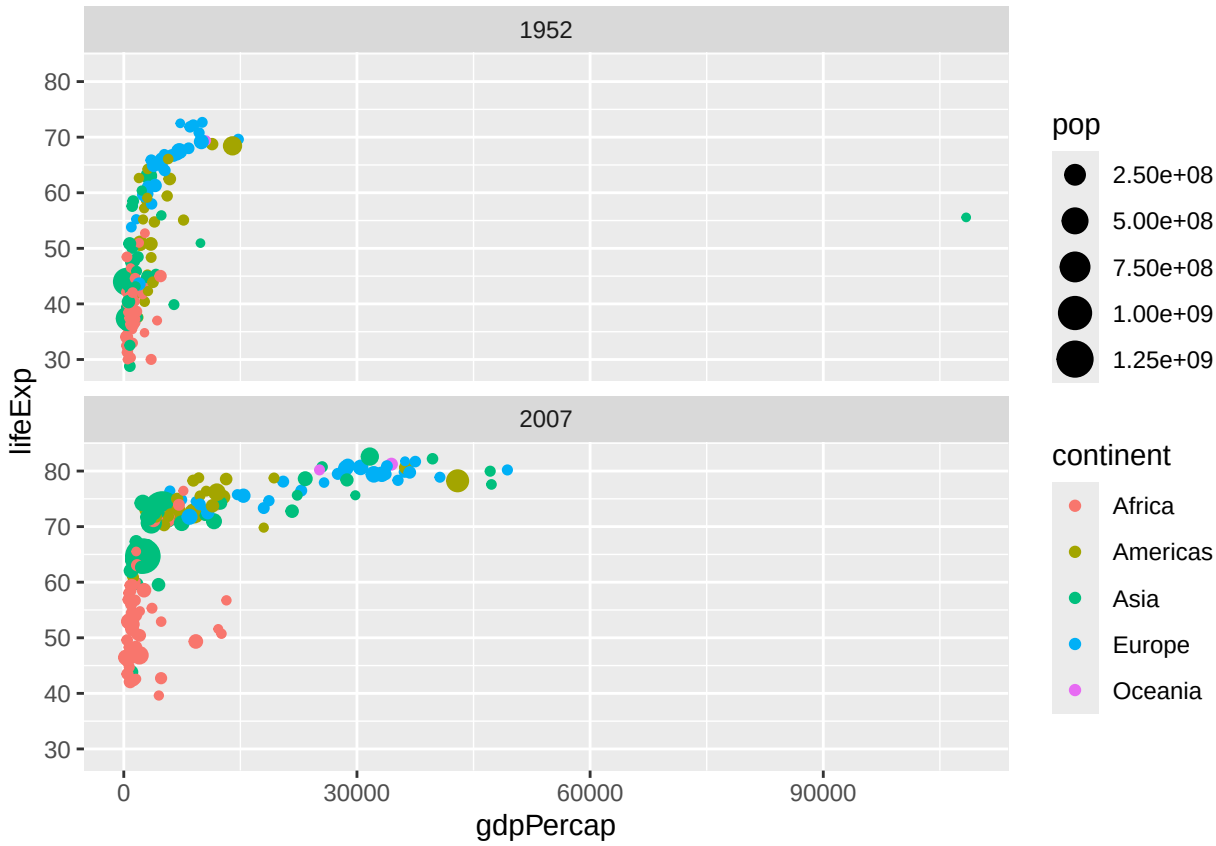
2024-07-26

## Load in packages and data

```
library(paletteer)
library(ggplot2)
library(gapminder)
library(tidyverse)
```

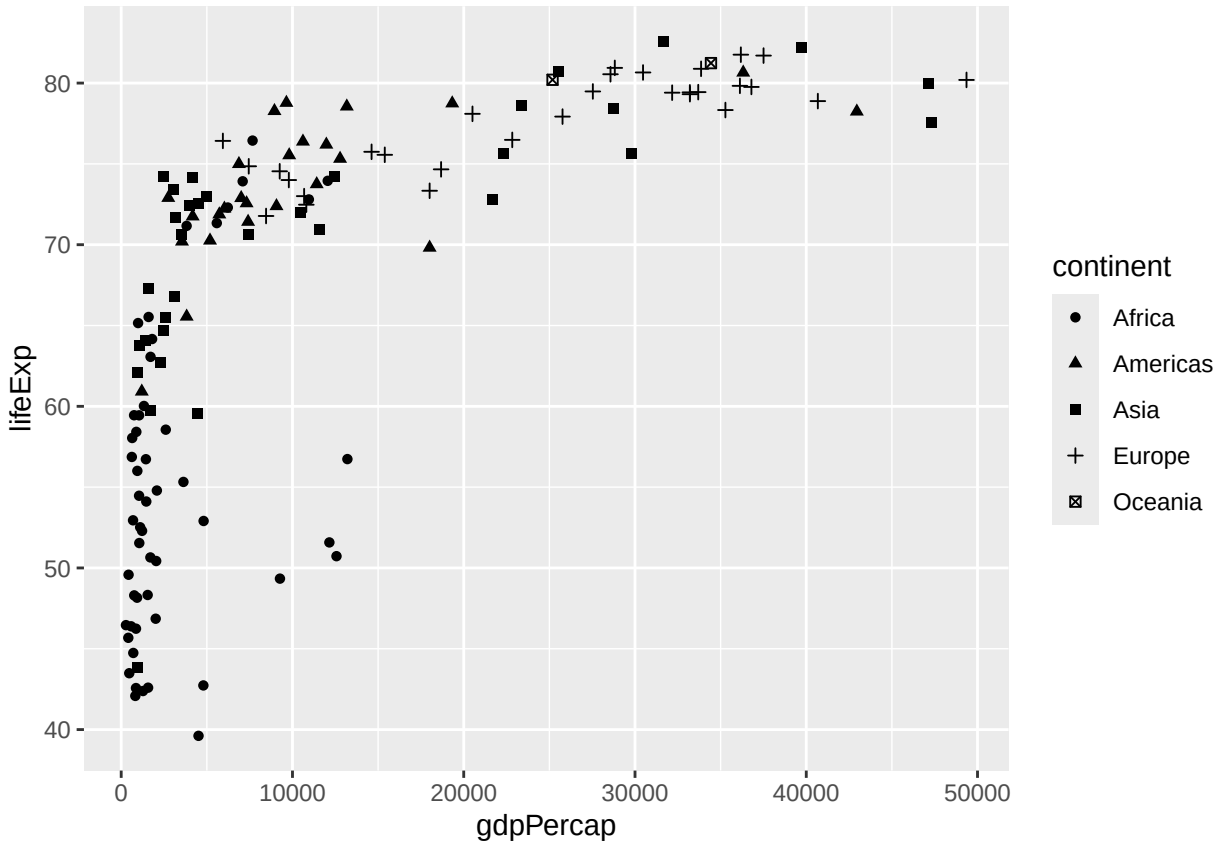
## Example 1

```
gapminder %>%
  filter(
    year %in% c(1952, 2007)
  ) %>%
  ggplot() +
  aes(x = gdpPercap) +
  aes(y = lifeExp) +
  geom_point() +
  aes(color = continent) +
  aes(size = pop) +
  facet_wrap(vars(year),
             nrow = 2)
```




## Example 2

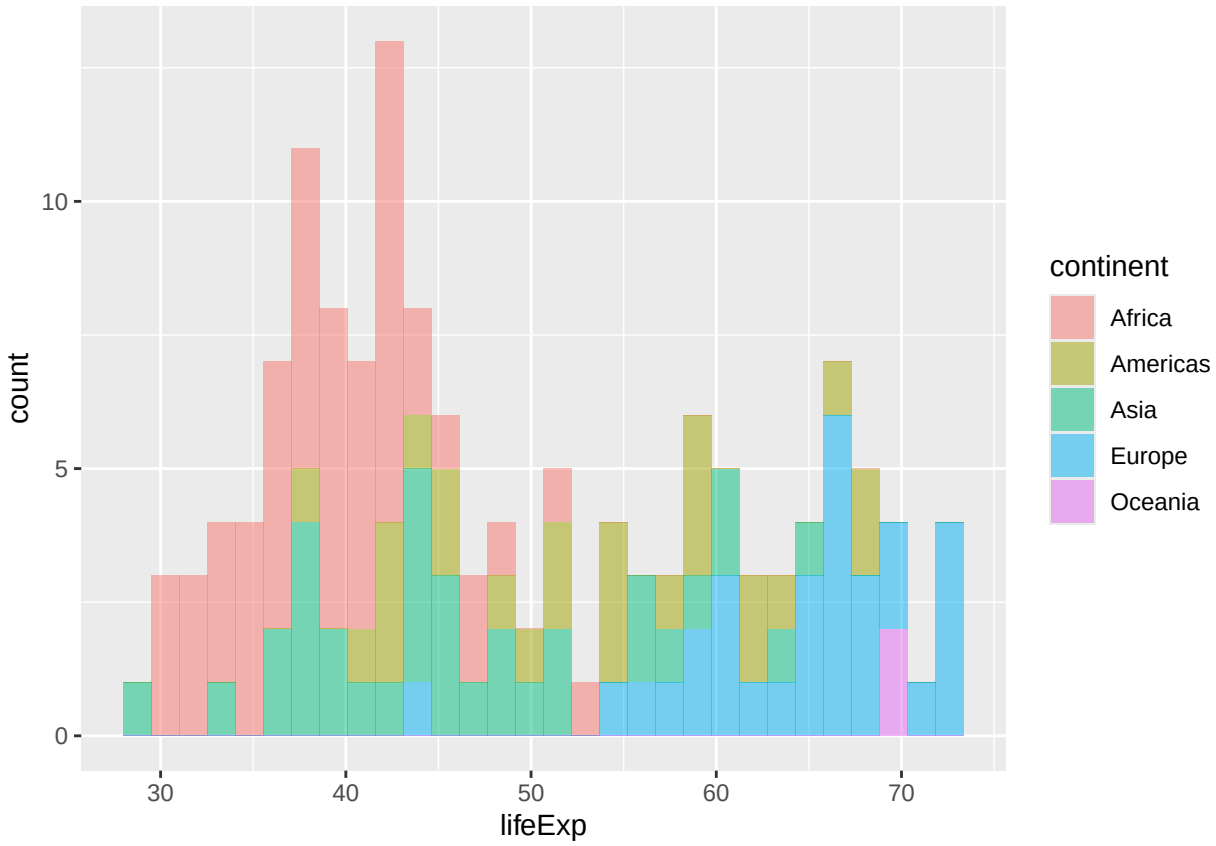
```
gapminder %>%
  filter(year == 2007) %>%
ggplot()+
  aes(x=gdpPercap,
      y=lifeExp,
      shape=continent)+
  geom_point()
```




## Geom_histogram

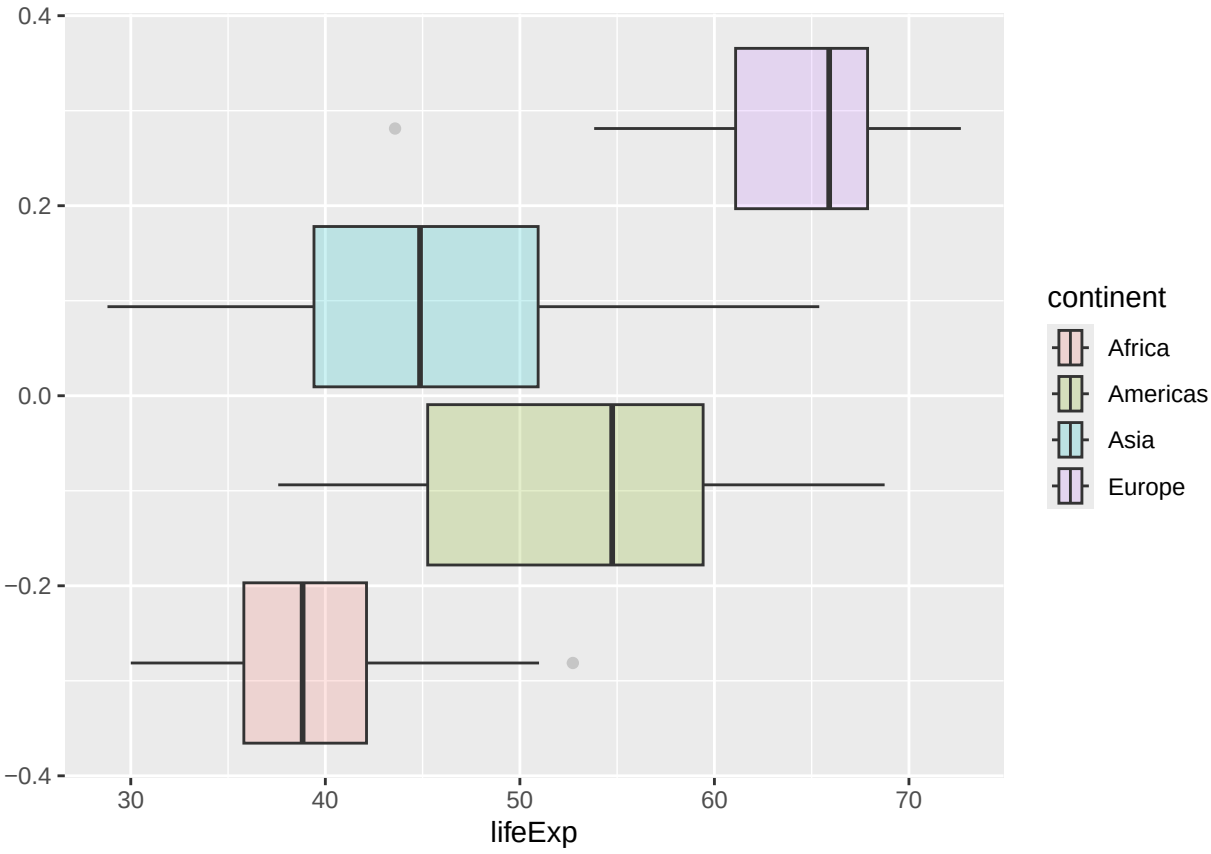
```
gapminder %>%
  filter(year == 1952) %>%
  ggplot()+
  aes(x=lifeExp,
      fill=continent)+
  geom_histogram(alpha=0.5)
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```




## geom_boxplot

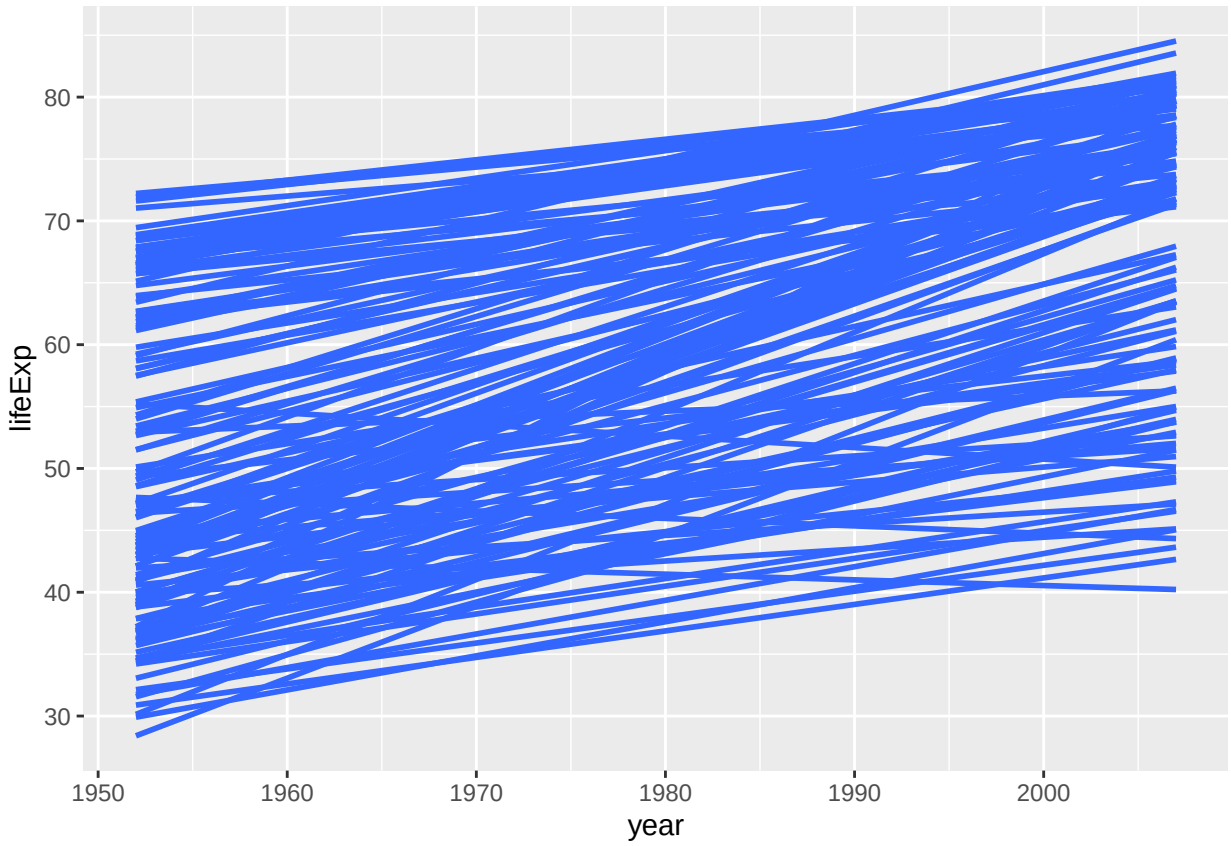
```
gapminder %>%
  filter(year == 1952,
         continent !='Oceania') %>%
  ggplot()+
  aes(x=lifeExp,
      fill=continent)+
  geom_boxplot(alpha=0.2)
```




## geom_contour

```
gapminder %>%
  ggplot()+
  aes(x=year,
      y=lifeExp,
      group=country)+
  geom_smooth(
    method = 'lm',
    se = FALSE
  )
```

```
## `geom_smooth()` using formula = 'y ~ x'
```

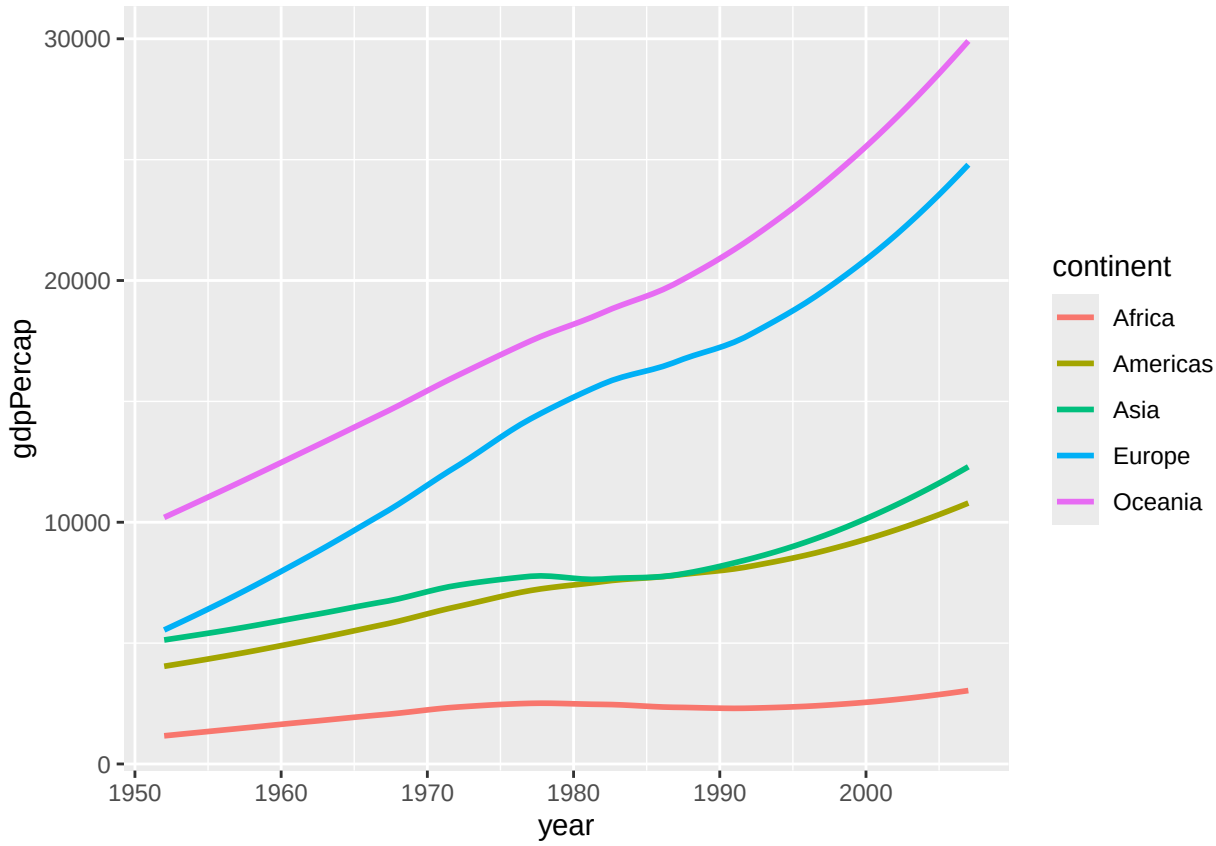



## Change across time

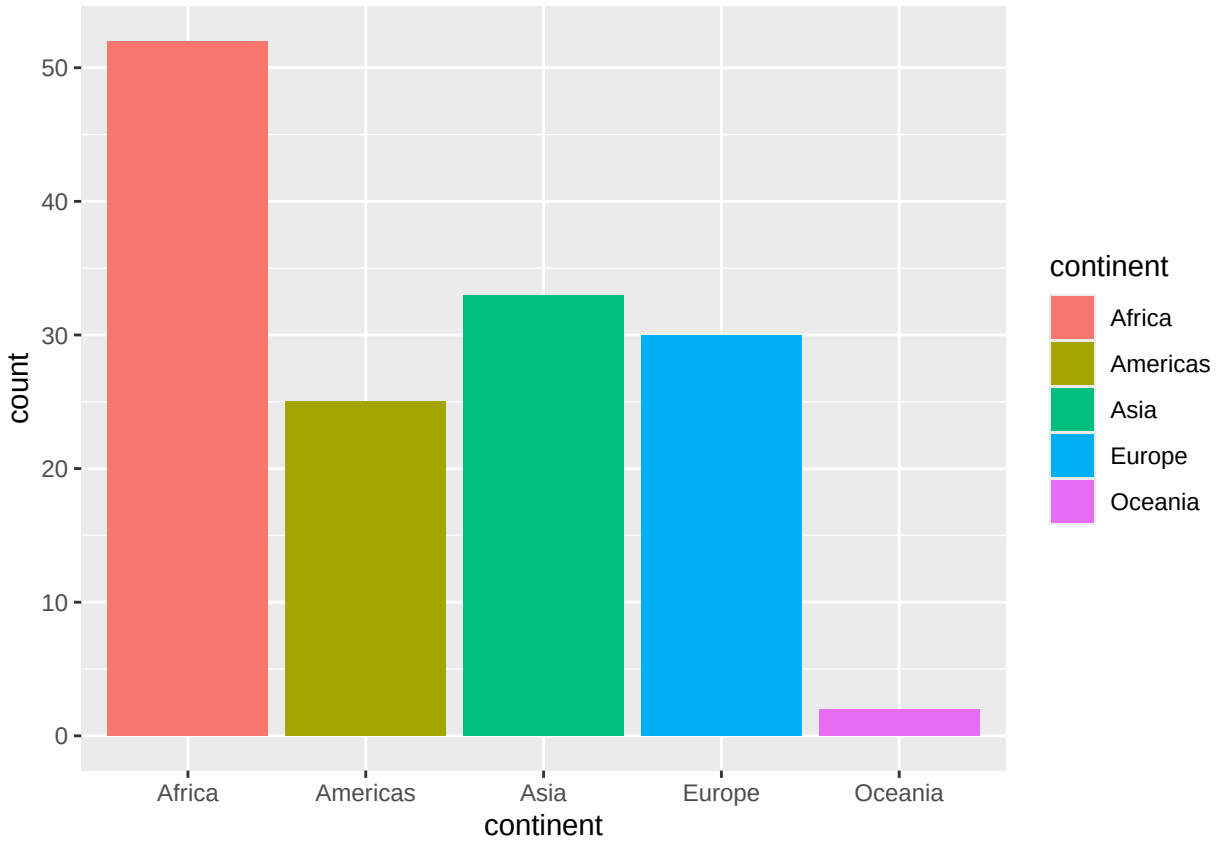
### compere trends in per capita GDP over time by continent

```
gapminder %>%
  ggplot()+
  aes(x=year,
      y=gdpPercap,
      color=continent)+
  geom_smooth(se=FALSE)
```

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```




```
gapminder %>%
  filter(year==2007) %>%
  group_by(continent) %>%
  summarise(count=n()) %>%
  ggplot()+
  aes(x=continent,
      y=count,
      fill=continent)+
  geom_col()
```

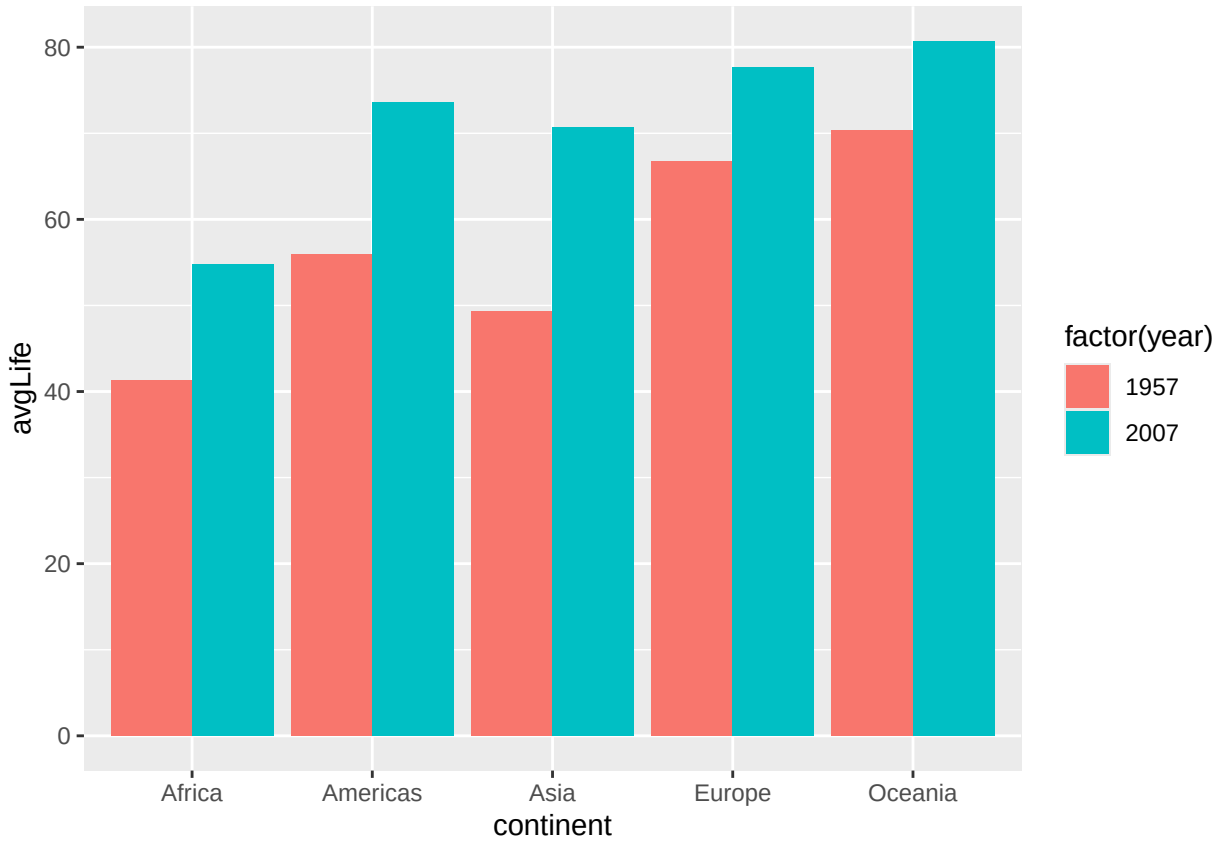



## Column Charts for Multiple Groups

## Life exp for each continent for years 1952-2007

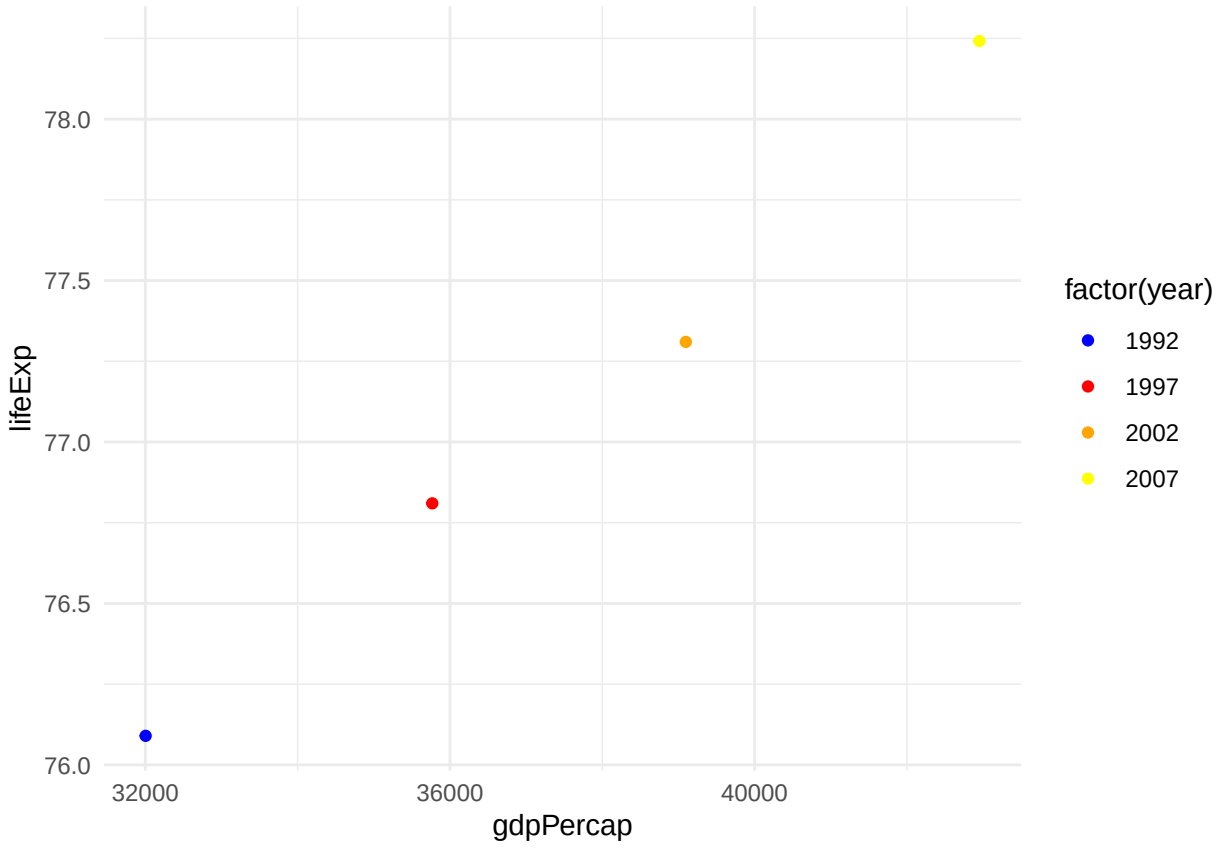
```
gapminder %>%
  filter(year %in% c(1957,2007)) %>%
  group_by(continent,year) %>%
  summarise(avgLife = mean(lifeExp)) %>%
  ggplot()+
  aes(x=continent,
      y=avgLife,
      fill=factor(year))+
  geom_col(position='dodge')
```

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



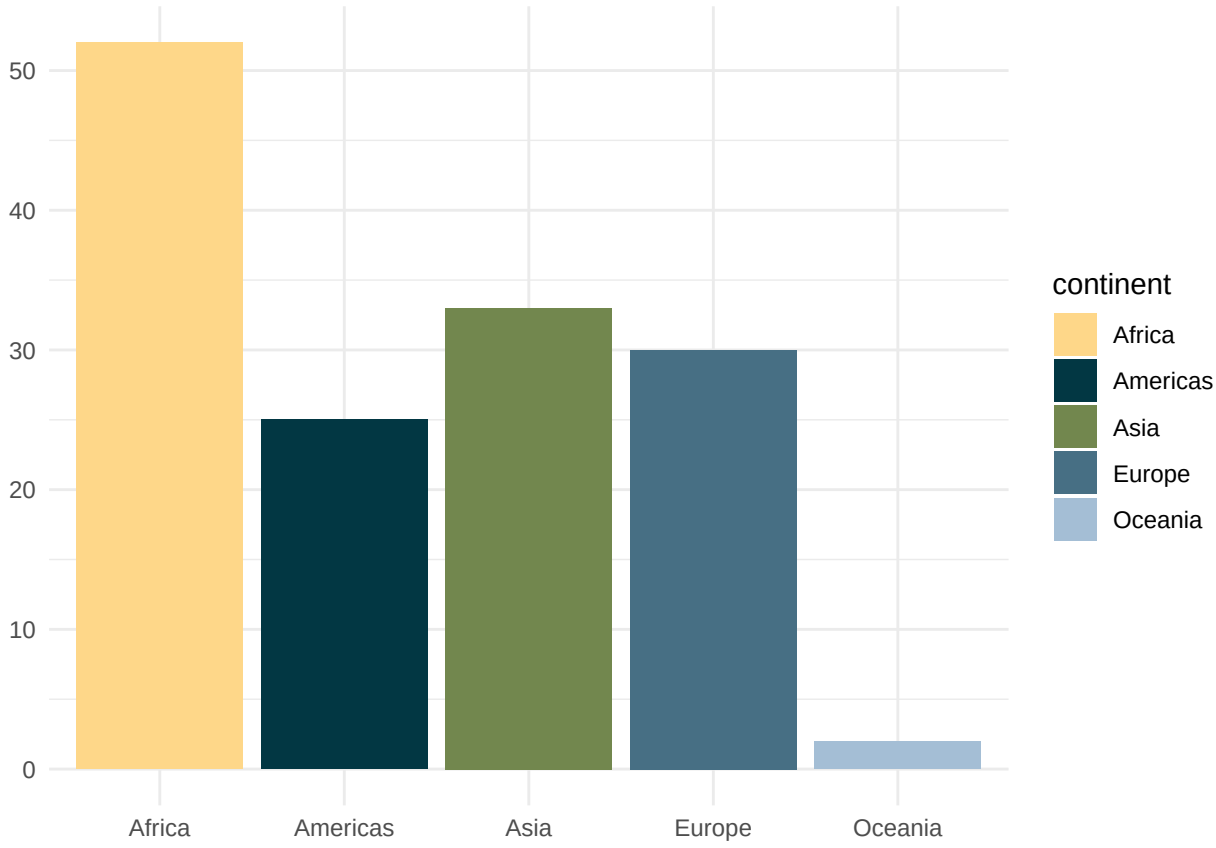

## Customizing Colors

```
p = gapminder %>%
  filter(country == 'United States', year > 1990) %>%
  ggplot()+
  aes(gdpPercap, lifeExp)+
  geom_point()

p=p+aes(color=factor(year))

p=p+scale_color_manual(
  values =
    c('1992'='blue',
      '1997'='red',
      '2002'='orange',
      '2007'='yellow')
  )+
  theme_minimal()
p
```




## Palatteer

```
# scale_colour_paletteer_d("nationalparkcolors::Acadia")
# scale_color_paletteer_d("nationalparkcolors::Acadia")
# scale_fill_paletteer_d("nationalparkcolors::Acadia")
# paletteer_d("nationalparkcolors::Acadia")

gapminder %>%
 filter(year==2007) %>%
 group_by(continent) %>%
 summarise(count=n()) %>%
 ggplot()+
 aes(x=continent,
     y=count,
     fill=continent)+
 geom_col()+
 scale_fill_paletteer_d("nationalparkcolors::Acadia") +
 labs(x = NULL, y = NULL) +
 theme_minimal()
```


50
40
30
20
10
0
Africa
Americas
Asia
Europe
Oceania
continent
Africa
Americas
Asia
Europe
Oceania