# Datacamp_Introduction_to_the_Tidyverse___Types of visualizations

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*2019/4/4*

```
library(ggplot2)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyverse)
```

```
## -- Attaching packages ------------------------- tidyverse 1.2.1 --
```

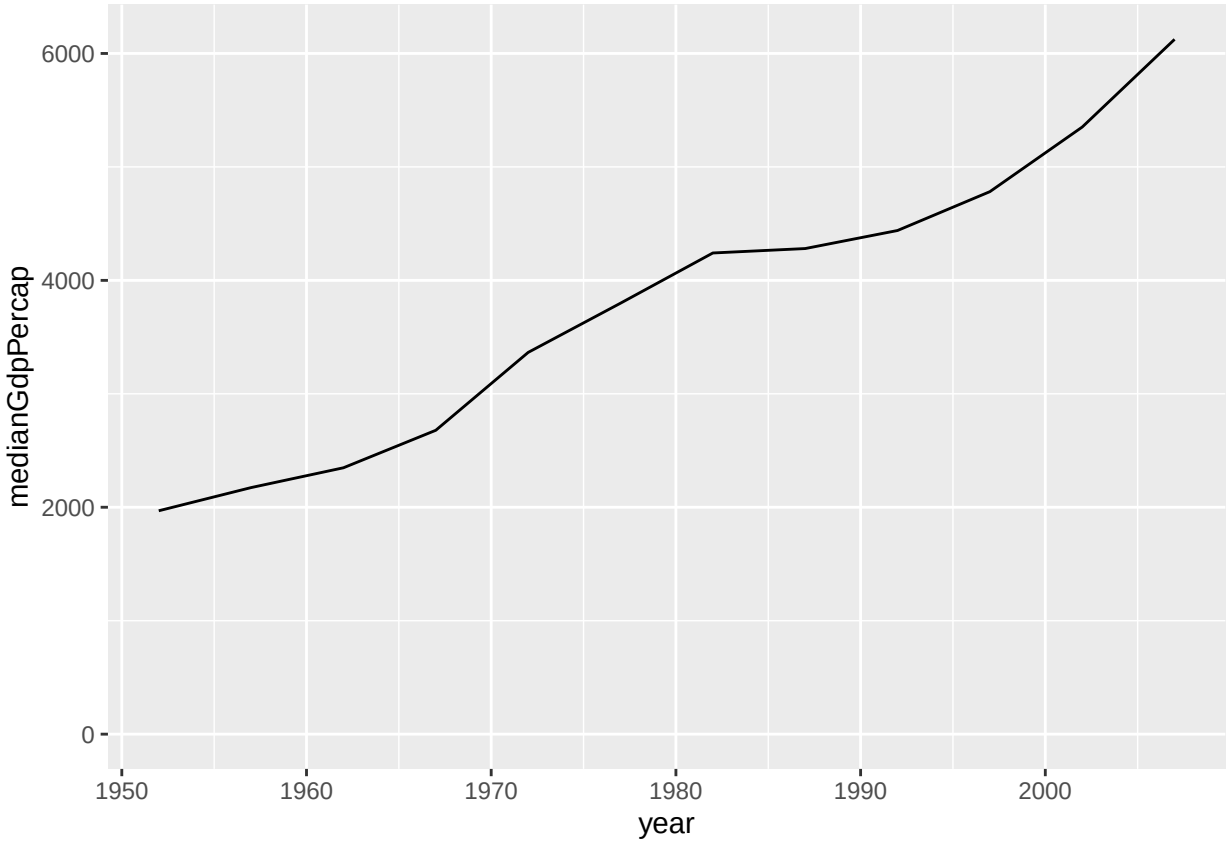
```
## v tibble  2.1.3     v purrr   0.3.2
## v tidyr   0.8.3     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.4.0
```

```
## -- Conflicts ---------------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
gapminder <- read.table(file = 'data/gapminder.tsv', sep = '\t', header = TRUE)
```

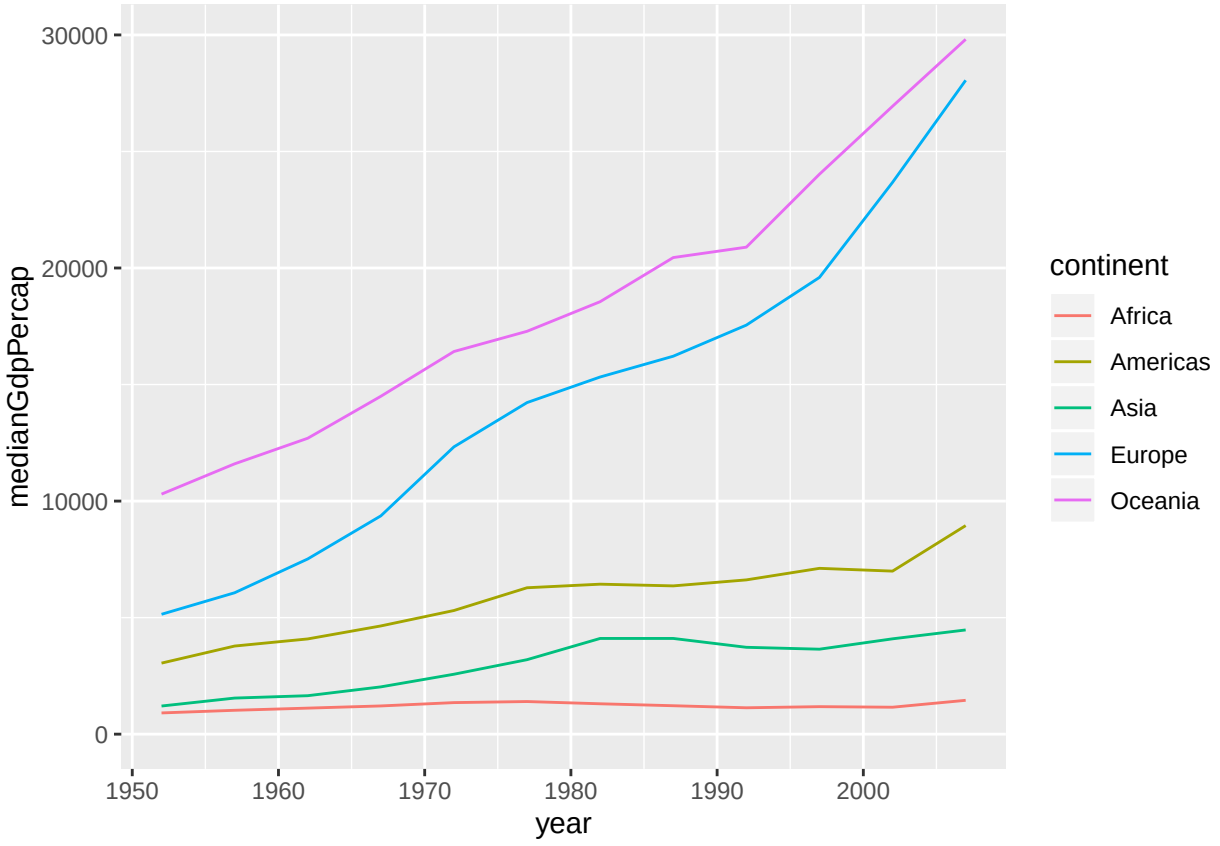
Visualizing median GDP per capita over time

```
# Summarize the median gdpPercap by year, then save it as by_year
by_year <- gapminder %>% group_by(year) %>% summarize(medianGdpPercap = median(gdpPercap))

# Create a line plot showing the change in medianGdpPercap over time
ggplot(by_year,aes(x = year, y = medianGdpPercap))+
  geom_line()+
  expand_limits(y = 0)
```



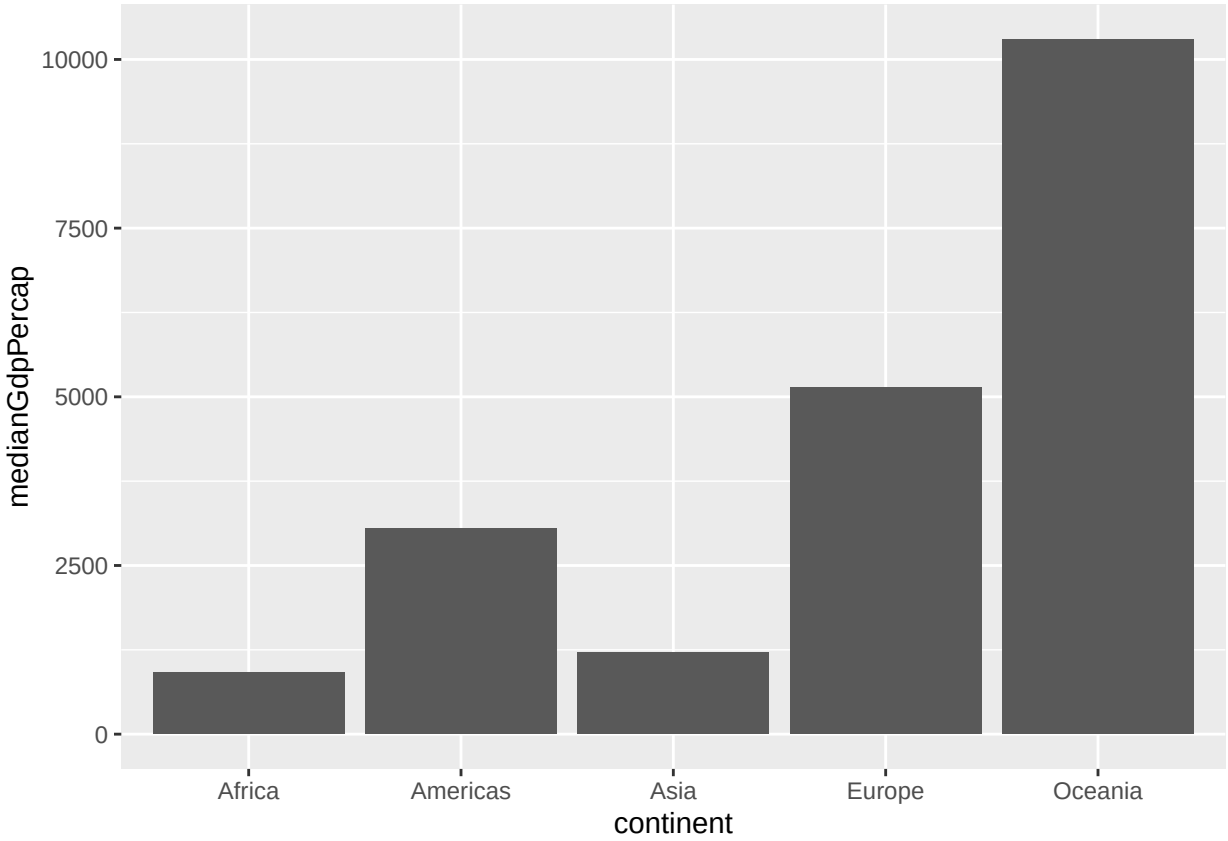

Visualizing median GDP per capita by continent over time

```
# Summarize the median gdpPercap by year & continent, save as by_year_continent
by_year_continent <- gapminder %>% group_by(year, continent) %>% summarize(medianGdpPercap = median(gdpl

# Create a line plot showing the change in medianGdpPercap by continent over time
ggplot(by_year_continent, aes(x = year, y = medianGdpPercap,color = continent)) +
  geom_line()+
  expand_limits(y = 0)
```



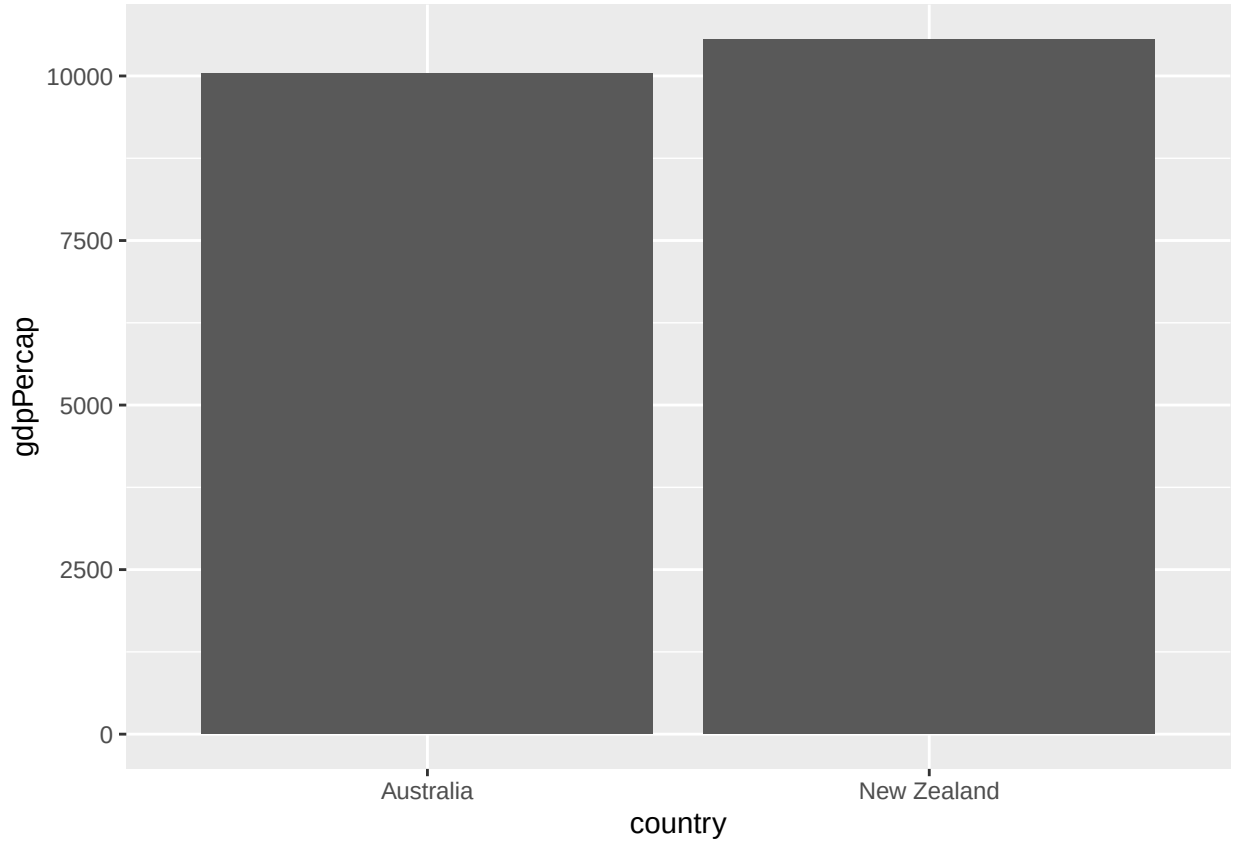

Visualizing median GDP per capita by continent

```
# Summarize the median gdpPercap by year and continent in 1952
by_continent <- gapminder %>%
  filter(year == 1952) %>%
  group_by(continent) %>%
  summarize(medianGdpPercap = median(gdpPercap))

# Create a bar plot showing medianGdp by continent
ggplot(by_continent,aes(x = continent, y = medianGdpPercap))+ geom_col()
```




Visualizing GDP per capita by country in Oceania

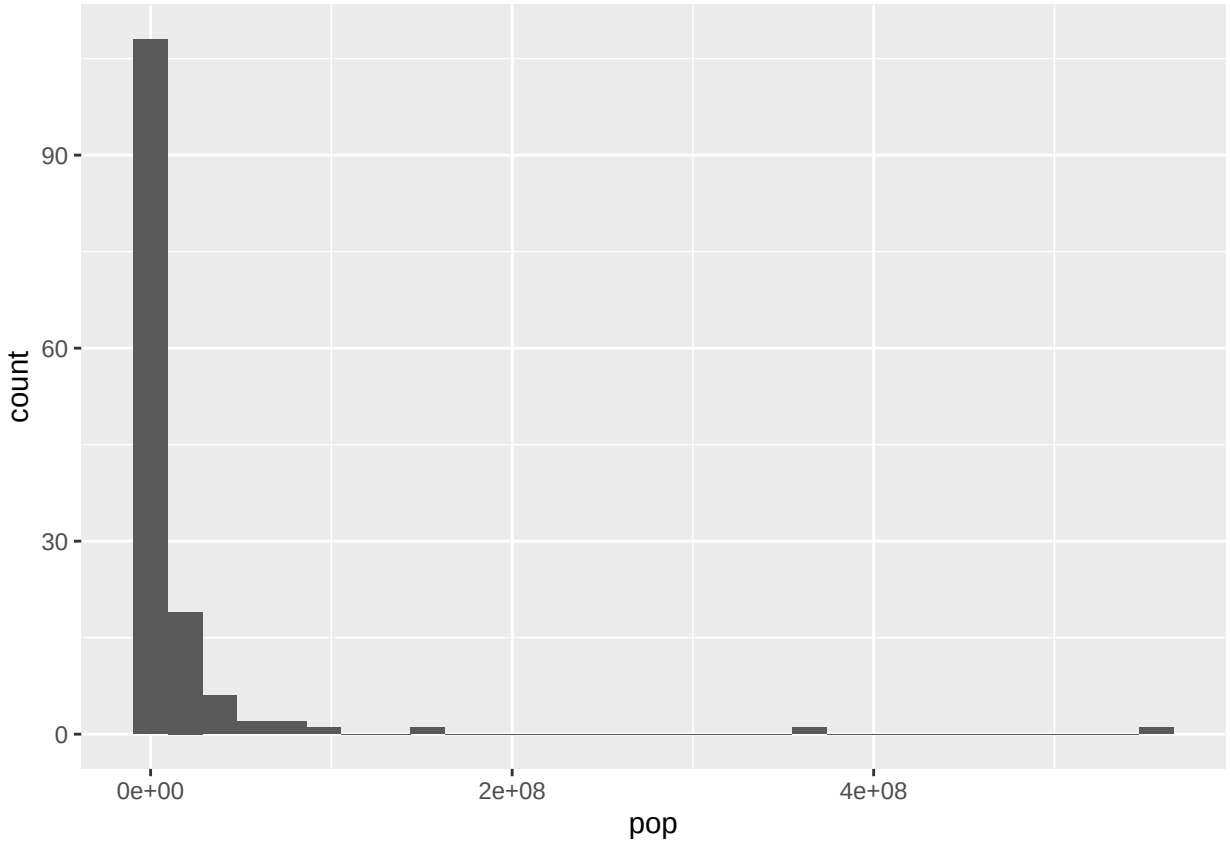
```
# Filter for observations in the Oceania continent in 1952
oceania_1952 <- gapminder %>% filter(continent == "Oceania", year == 1952)

# Create a bar plot of gdpPercap by country
ggplot(oceania_1952,aes(x = country, y = gdpPercap)) + geom_col()
```




Visualizing population

```
gapminder_1952 <- gapminder %>%
  filter(year == 1952)

# Create a histogram of population (pop)
ggplot(gapminder_1952,aes(pop)) + geom_histogram()
```

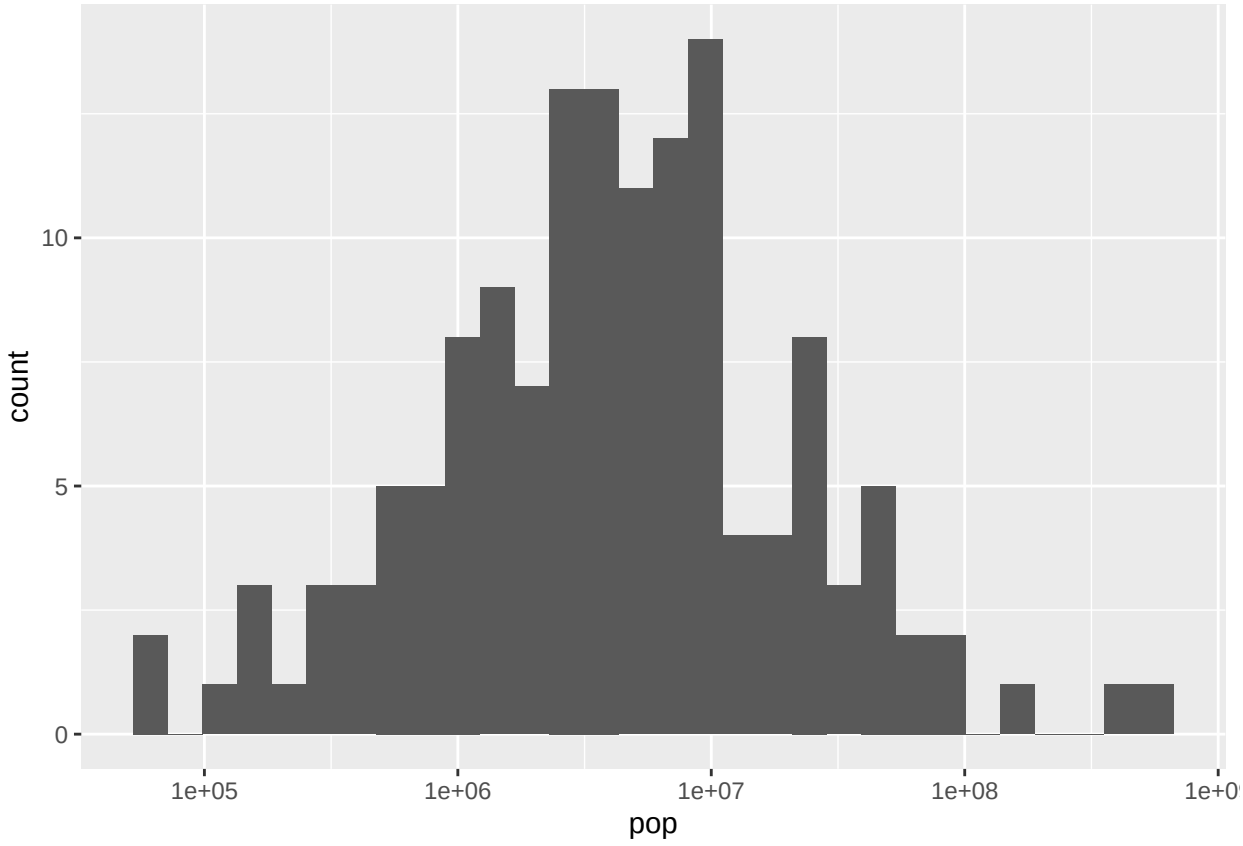
```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```




Visualizing population with x-axis on a log scale

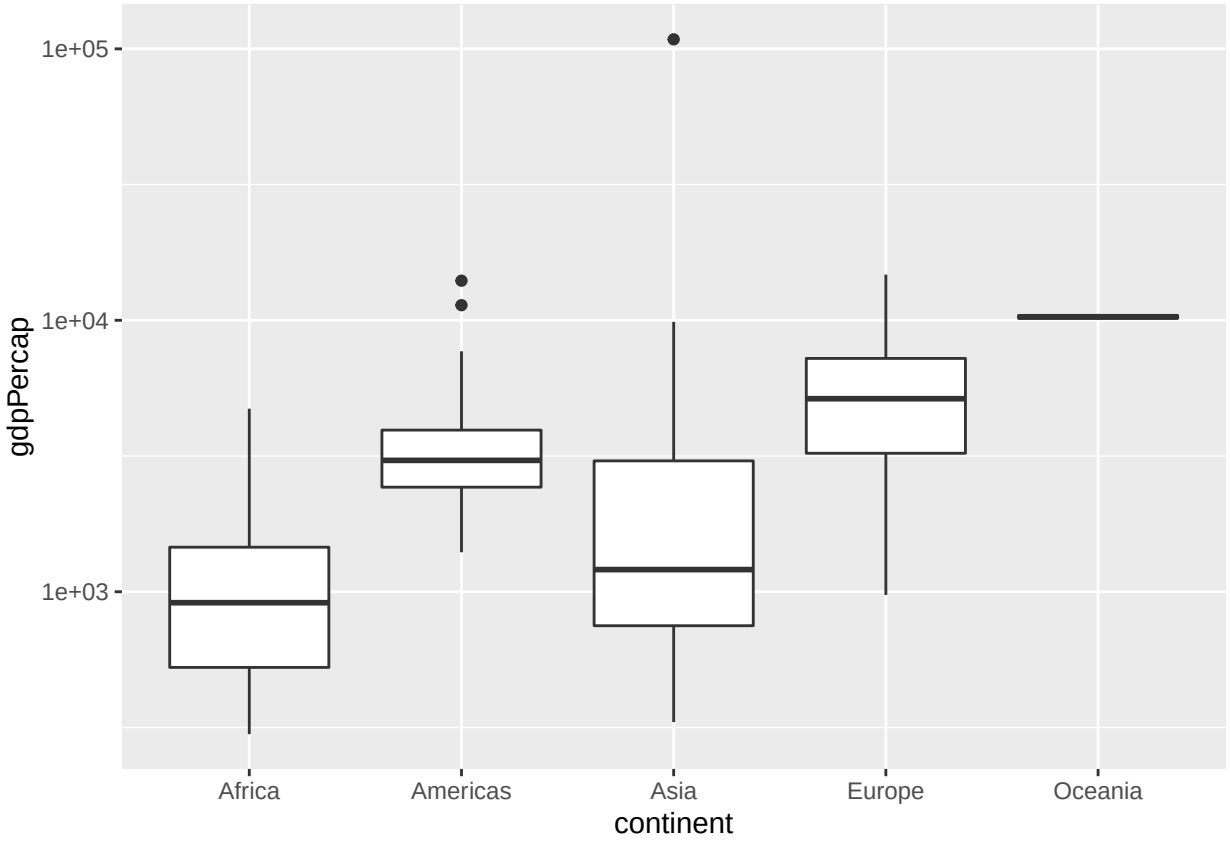
```
gapminder_1952 <- gapminder %>%
  filter(year == 1952)

# Create a histogram of population (pop), with x on a log scale
ggplot(gapminder_1952,aes(pop))+ geom_histogram()+scale_x_log10()
```

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

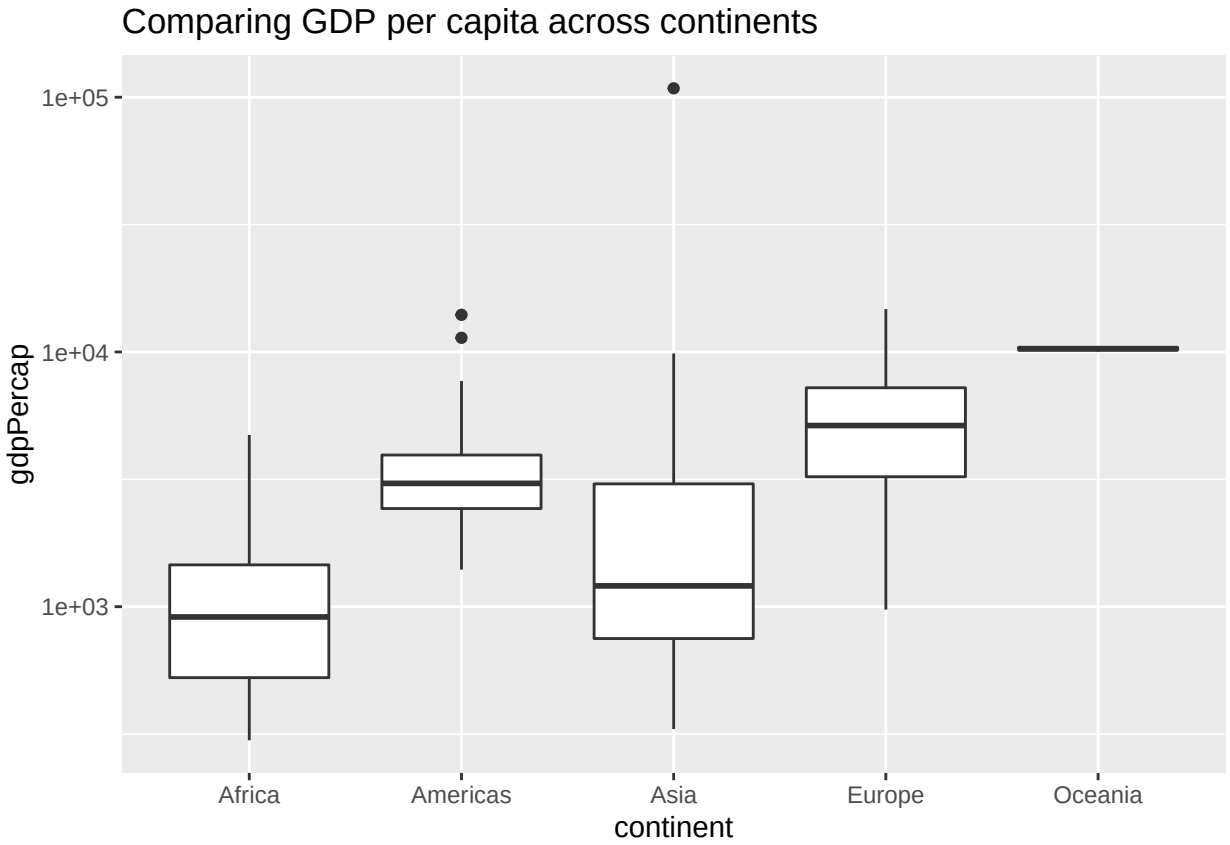



Comparing GDP per capita across continents

```
gapminder_1952 <- gapminder %>%
  filter(year == 1952)

# Create a boxplot comparing gdpPercap among continents
ggplot(gapminder_1952,aes(x = continent,y = gdpPercap)) + geom_boxplot() + scale_y_log10()
```




```
gapminder_1952 <- gapminder %>%
  filter(year == 1952)

# Add a title to this graph: "Comparing GDP per capita across continents"
ggplot(gapminder_1952, aes(x = continent, y = gdpPercap)) +
  geom_boxplot() +
  scale_y_log10() +  ggtitle("Comparing GDP per capita across continents")
```


Comparing GDP per capita across continents
1e+05
1e+04
1e+03
gdpPercap
Africa
Americas
Asia
Europe
Oceania
continent