

Analysis of GDP per capita and average life expectancy across continents using the gapminder dataset.

Load the data and some required libraries:

```
library(gapminder)
library(ggplot2)

data("gapminder")
```

Look at the first and the last 5 rows of the dataset:

```
head(gapminder, 5)
```

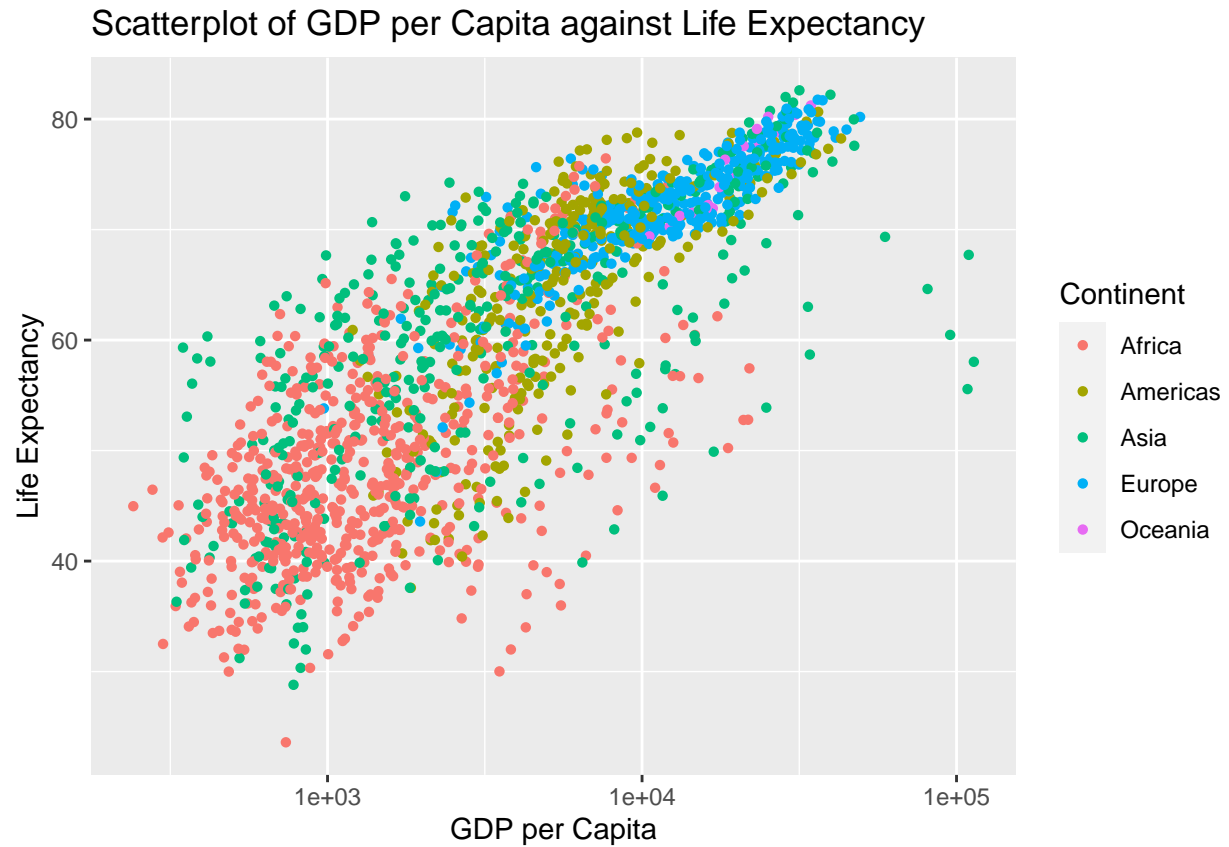
```
## # A tibble: 5 x 6
##   country    continent  year lifeExp      pop gdpPercap
##   <fct>      <fct>    <int>  <dbl>    <int>    <dbl>
## 1 Afghanistan Asia      1952   28.8  8425333    779.
## 2 Afghanistan Asia      1957   30.3  9240934    821.
## 3 Afghanistan Asia      1962   32.0 10267083    853.
## 4 Afghanistan Asia      1967   34.0 11537966    836.
## 5 Afghanistan Asia      1972   36.1 13079460    740.
```

```
tail(gapminder, 5)
```

```
## # A tibble: 5 x 6
##   country    continent  year lifeExp      pop gdpPercap
##   <fct>      <fct>    <int>  <dbl>    <int>    <dbl>
## 1 Zimbabwe Africa      1987   62.4  9216418    706.
## 2 Zimbabwe Africa      1992   60.4 10704340    693.
## 3 Zimbabwe Africa      1997   46.8 11404948    792.
## 4 Zimbabwe Africa      2002   40.0 11926563    672.
## 5 Zimbabwe Africa      2007   43.5 12311143    470.
```

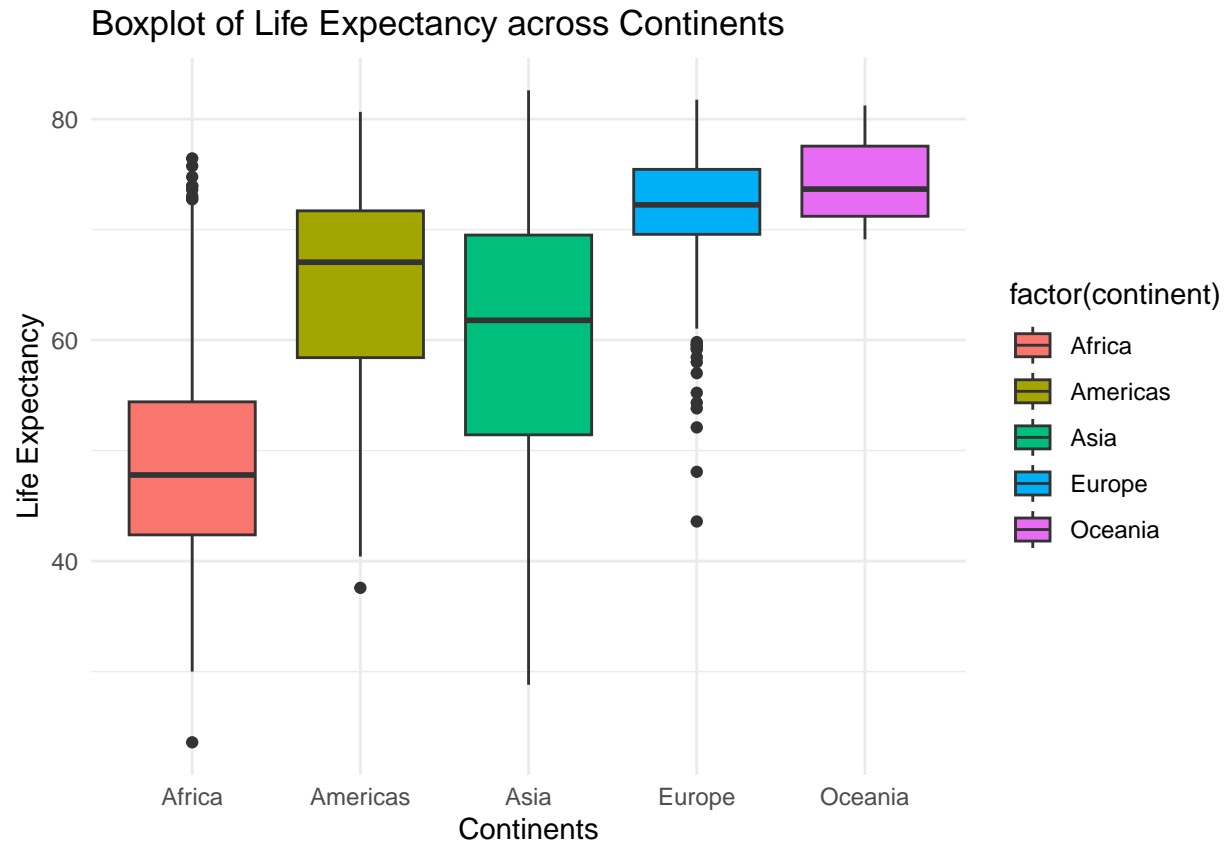
Analyse GDP per capita against life expectancy:

```
ggplot(gapminder, aes(x = gdpPercap, y = lifeExp, color=factor(continent))) +
  geom_point(shape = 16) +
  labs(title = "Scatterplot of GDP per Capita against Life Expectancy",
       x = "GDP per Capita",
       y = "Life Expectancy",
       color = "Continent",
  ) +
  scale_x_log10()
```



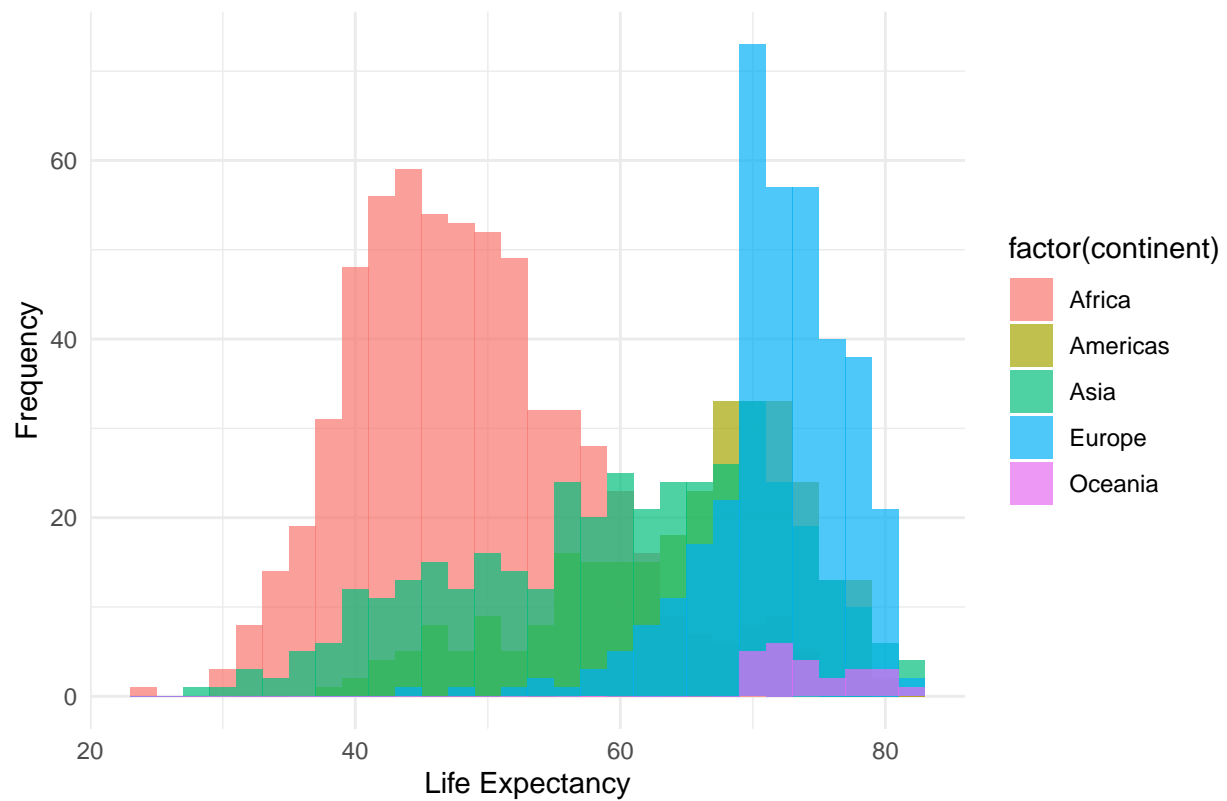
Analyse life expectancy across continents:

```
ggplot(gapminder, aes(x = factor(continent), y = lifeExp, fill = factor(continent))) +  
  geom_boxplot() +  
  labs(title = "Boxplot of Life Expectancy across Continents",  
        x = "Continents",  
        y = "Life Expectancy",  
        ) +  
  theme_minimal()
```



```
ggplot(gapminder, aes(x = lifeExp, fill = factor(continent))) +
  geom_histogram(binwidth = 2, position = "identity", alpha = 0.7) +
  labs(title = "Histogram of Life Expectancy across Continents",
       x = "Life Expectancy",
       y = "Frequency",
       ) +
  theme_minimal()
```

Histogram of Life Expectancy across Continents



```
ggplot(gapminder, aes(x = lifeExp, fill = factor(continent))) +  
  geom_density(alpha = 0.7) +  
  labs(title = "Density plot of Life Expectancy across Continents",  
        x = "Life Expectancy",  
        y = "Frequency density",  
  ) +  
  theme_minimal()
```

