

Python, R, Tableau Charts

Line Chart, Step Chart

Line Charts

Python

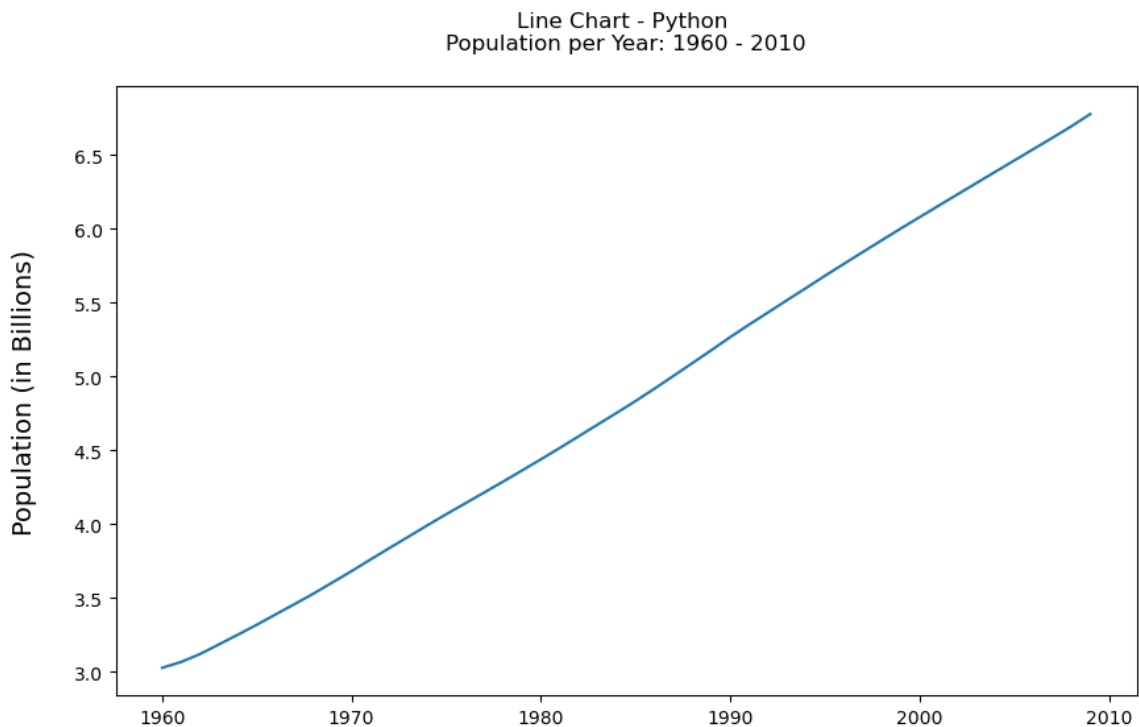
```
plt.rcParamsdefaults()

fig, ax = plt.subplots(figsize=(10, 6))

# plot bar chart
ax.plot(population_df['Year'], (population_df['Population'] / 1000000000))

# set labels
ax.set_ylabel('Population (in Billions)', fontsize = 14)
ax.ticklabel_format(useOffset = False, style = 'plain')
ax.set_title('Line Chart - Python \nPopulation per Year: 1960 - 2010', pad = 20)
ax.yaxis.labelpad = 20.0

plt.show()
```



R

```

```{r}
#| label: linechart
#| fig-width: 6.5

fig <- plot_ly(population_df, x = ~Year, y = ~Population,
 type = 'scatter', mode = 'lines')

fig <- fig %>%
 layout(
 title = "Line Chart - R \nWorld Population per Year",
 xaxis = list(showgrid = FALSE,
 title = ""),
 yaxis = list(showgrid = FALSE,
 title = "Population (billions)",
 titlefont = list(size = 22)),
 margin = list(l = 5, r = 5, b = 10, t = 30, pad = 10)
)

export(fig, file = "images/linechart-r.png")
```

```

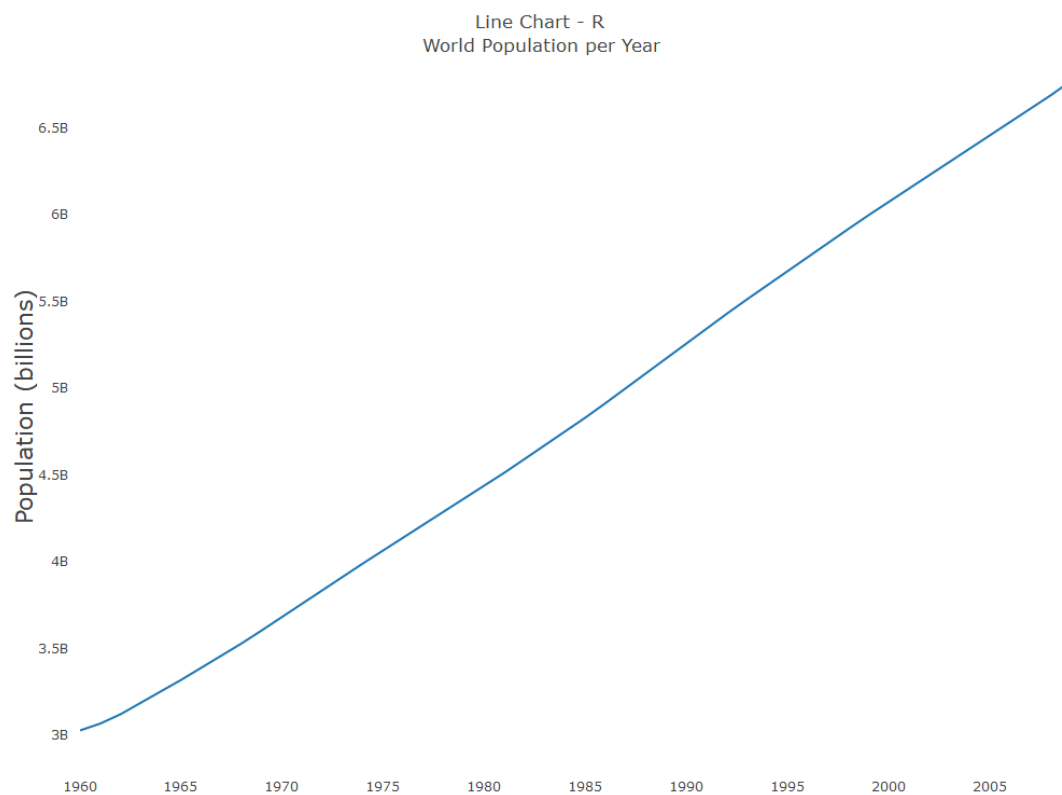
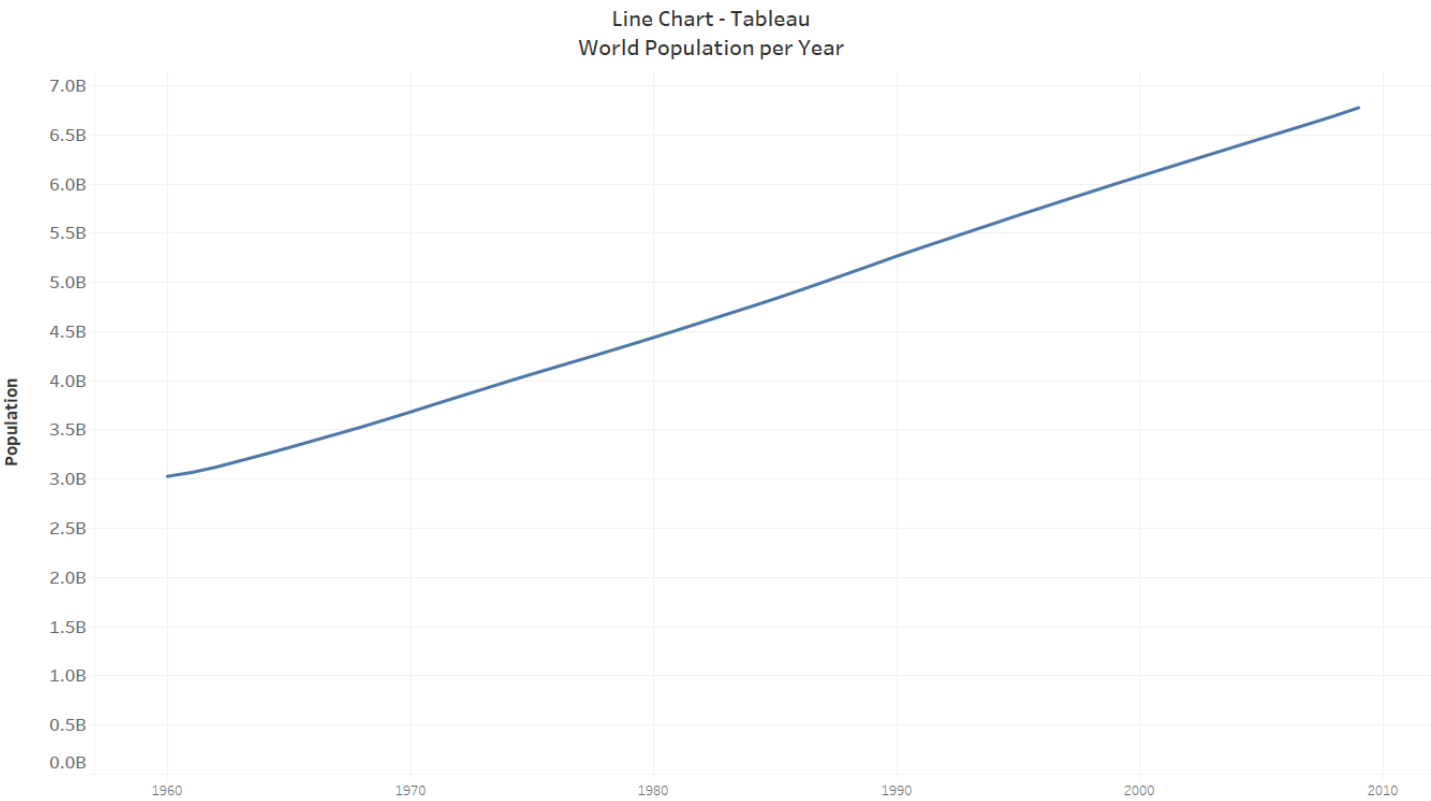


Tableau
(Please see Weeks3-4_Tableau.twb for code)



Step Charts

Python

```
plt.rcParams()
fig, ax = plt.subplots(figsize=(10, 6))

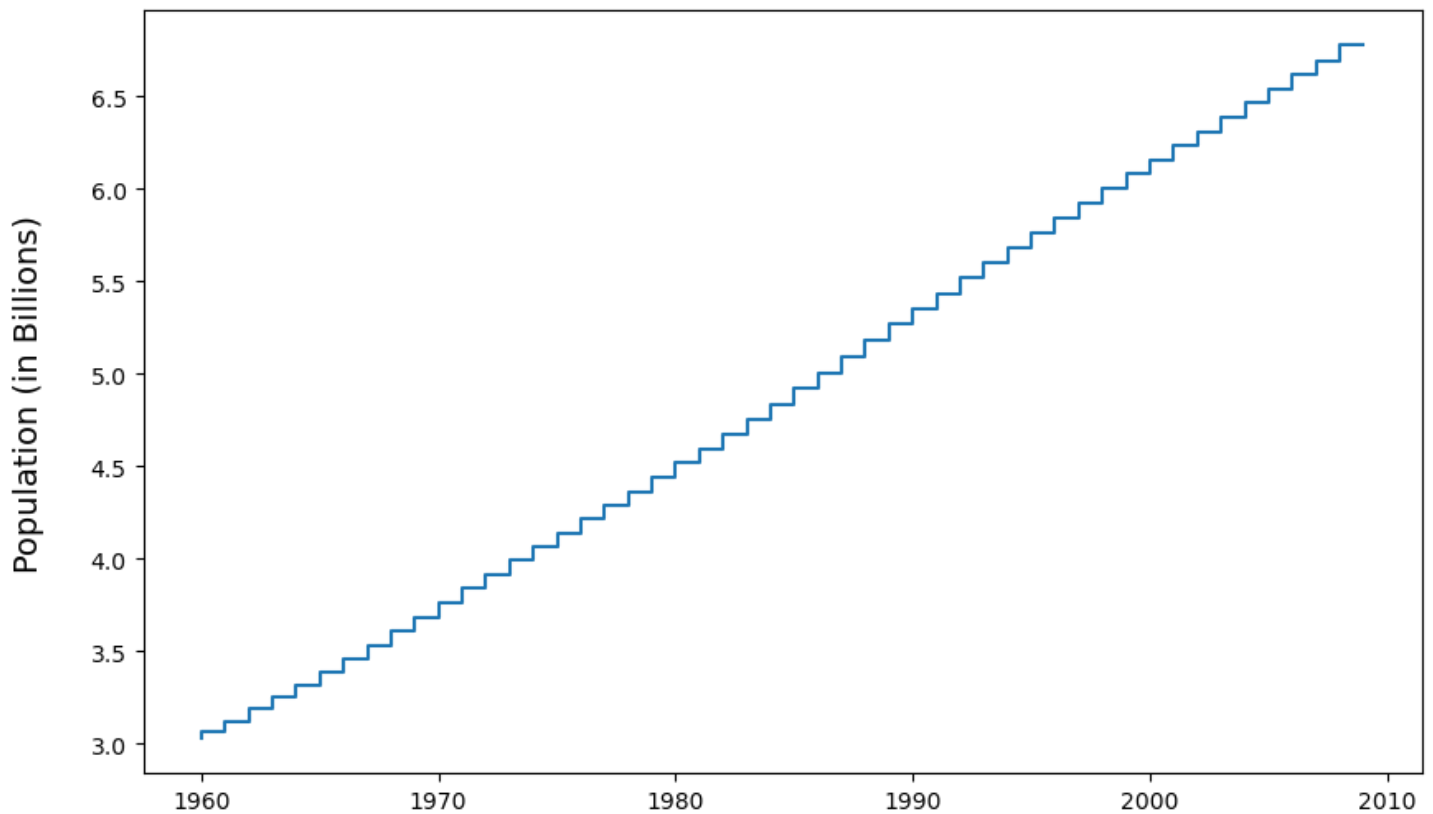
# plot bar chart
ax.step(population_df['Year'], (population_df['Population'] / 1000000000))

# set labels
ax.set_ylabel('Population (in Billions)', fontsize = 14)
ax.ticklabel_format(useOffset = False, style = 'plain')
ax.set_title('Step Chart - Python \nPopulation per Year: 1960 - 2010', pad = 20)
ax.yaxis.labelpad = 20.0

plt.show()

# Save figure
ax.get_figure().savefig('images/stepchart-python.png',
                        bbox_inches = 'tight',
                        transparent = True)
```

Step Chart - Python
Population per Year: 1960 - 2010



R

```
```{r}
#| label: stepchart
#| fig-width: 6.5

fig <- plot_ly(population_df, x = ~Year, y = ~Population,
 mode = "lines", type = 'scatter',
 line = list(shape = "hv"))

fig <- fig %>%
 layout(
 title = "Step Chart - R \nWorld Population per Year",
 xaxis = list(showgrid = FALSE,
 title = ""),
 yaxis = list(showgrid = FALSE,
 title = "Population (billions)",
 titlefont = list(size = 22)),
 margin = list(l = 5, r = 5, b = 10, t = 30, pad = 10)
)

export(fig, file = "images/stepchart-r.png")
```
```

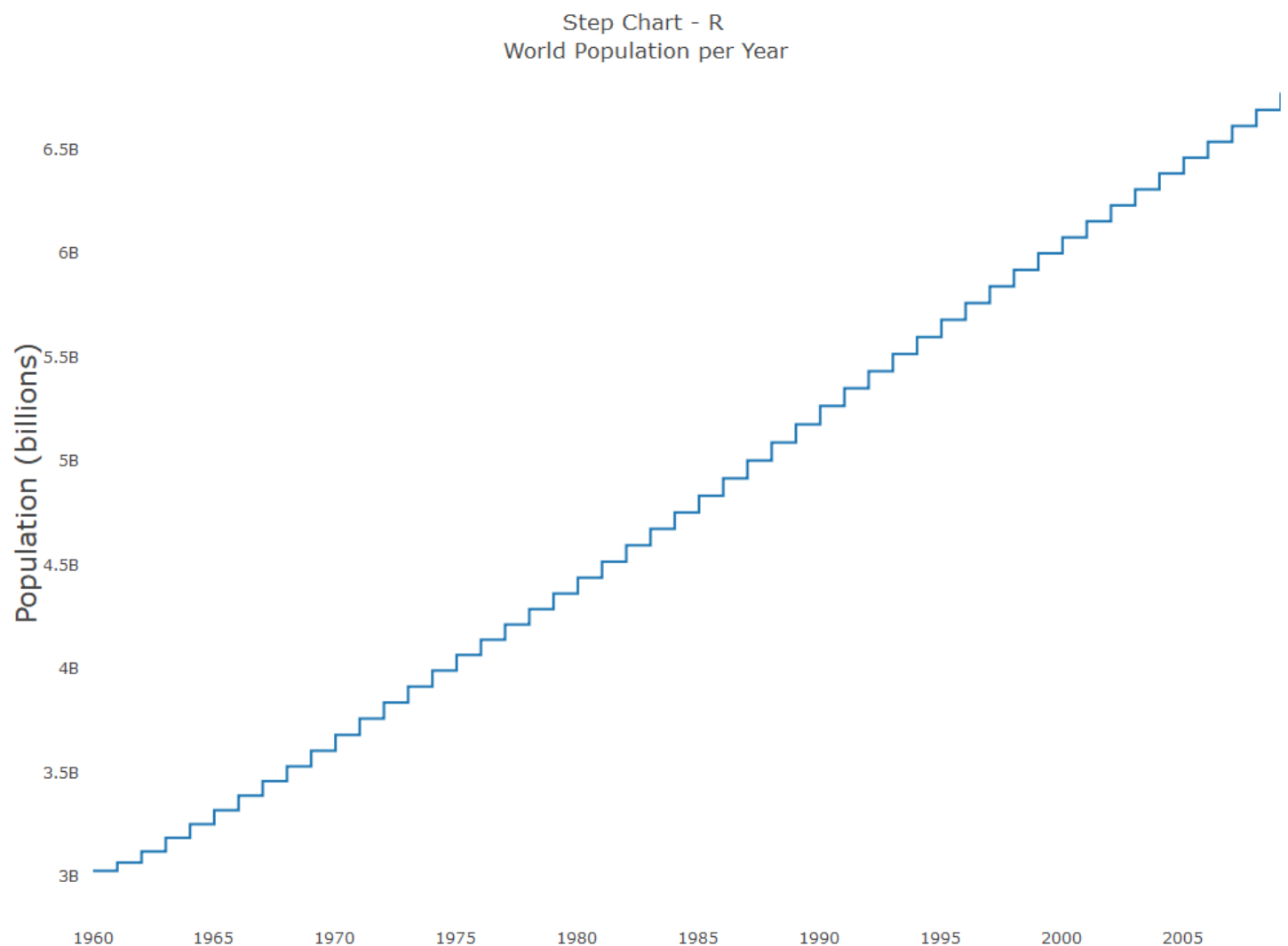


Tableau
(Please see Weeks3-4_Tableau.twb for code)

