

Practicando

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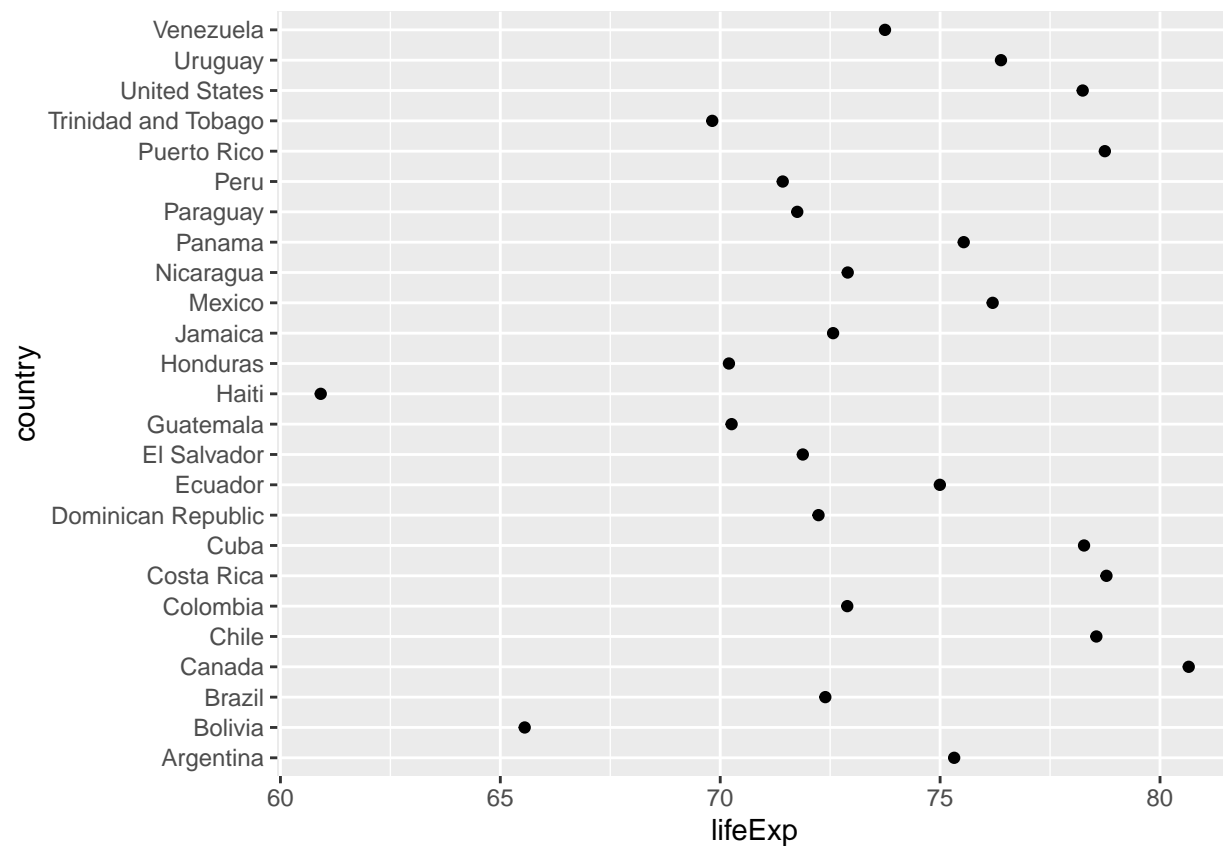
Primeros pasos

En este documentos se plasman los primeros pasos del uso de Git en RStudio. Para este primer ejercicio se hace uso de la base de datos **gapminder**.

```
colnames(gapminder)
```

```
## [1] "country" "continent" "year" "lifeExp" "pop" "gdpPercap"
```

```
gapminder %>%  
  filter(continent == 'Americas', year == 2007) %>%  
  ggplot(aes(x=lifeExp, y=country )) +  
  geom_point()
```

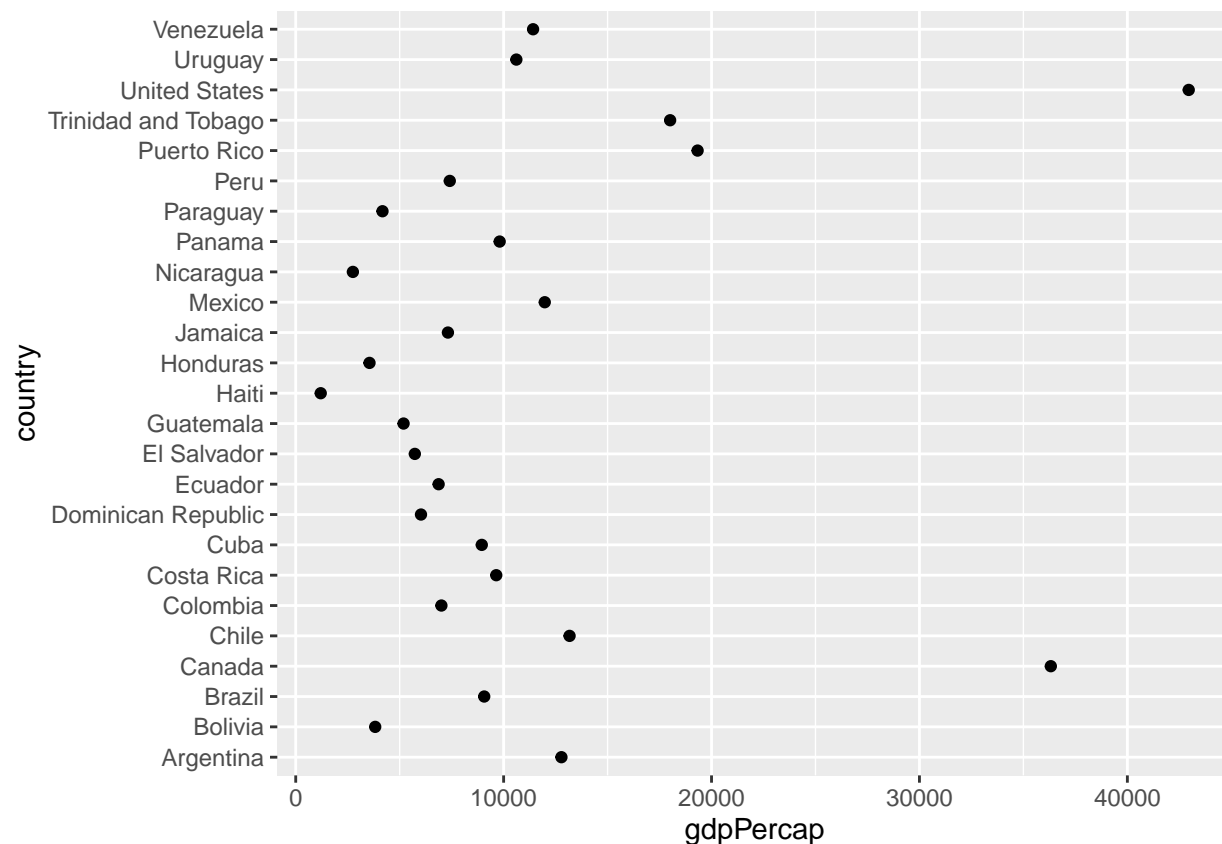


```
gapminder %>%  
  mutate(pop_m = round(pop / 1000000, 2))
```

```
## # A tibble: 1,704 x 7
##   country    continent  year lifeExp      pop gdpPercap pop_m
##   <fct>      <fct>    <int> <dbl>    <int>    <dbl> <dbl>
## 1 Afghanistan Asia      1952   28.8  8425333    779.   8.43
## 2 Afghanistan Asia      1957   30.3  9240934    821.   9.24
## 3 Afghanistan Asia      1962   32.0 10267083    853.  10.3
## 4 Afghanistan Asia      1967   34.0 11537966    836.  11.5
## 5 Afghanistan Asia      1972   36.1 13079460    740.  13.1
## 6 Afghanistan Asia      1977   38.4 14880372    786.  14.9
## 7 Afghanistan Asia      1982   39.9 12881816    978.  12.9
## 8 Afghanistan Asia      1987   40.8 13867957    852.  13.9
## 9 Afghanistan Asia      1992   41.7 16317921    649.  16.3
## 10 Afghanistan Asia      1997   41.8 22227415    635.  22.2
## # ... with 1,694 more rows
```

Ordenar datos

```
gapminder %>%
  filter(year == 2007 & continent == "Americas") %>%
  arrange(gdpPercap) %>%
  ggplot(aes(x=gdpPercap, y=country)) +
  geom_point()
```



```
gapminder %>%
  summarise(max_edv = max(lifeExp ))
```

```
## # A tibble: 1 x 1
##   max_edv
##   <dbl>
```

```
## 1      82.6
```

```
gapminder %>%  
  filter(lifeExp >= 82.6)
```

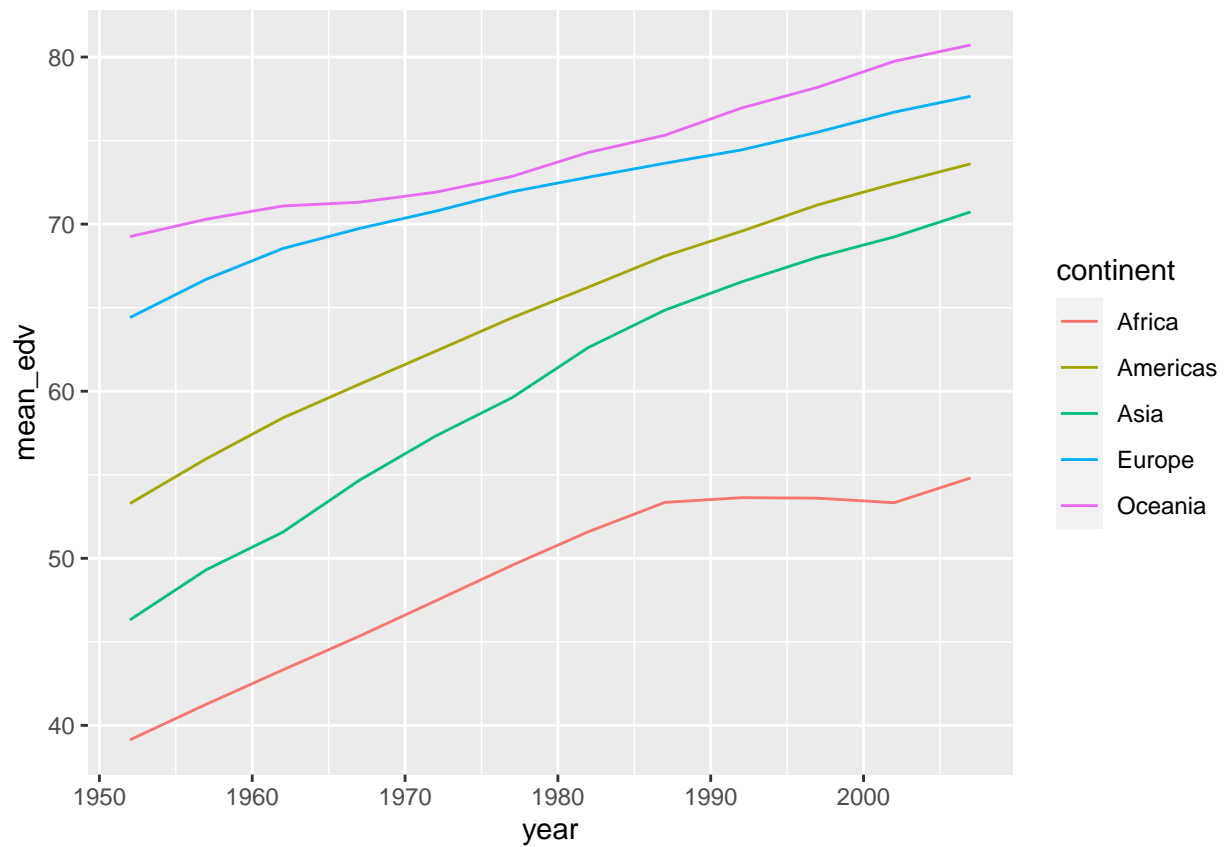
```
## # A tibble: 1 x 6  
##   country continent  year lifeExp      pop gdpPercap  
##   <fct>   <fct>     <int>   <dbl>    <int>    <dbl>  
## 1 Japan   Asia       2007    82.6 127467972  31656.
```

```
gapminder %>%  
  group_by(year) %>%  
  summarise(mean_edv = mean(lifeExp) )
```

```
## # A tibble: 12 x 2  
##   year mean_edv  
##   * <int>     <dbl>  
## 1 1952      49.1  
## 2 1957      51.5  
## 3 1962      53.6  
## 4 1967      55.7  
## 5 1972      57.6  
## 6 1977      59.6  
## 7 1982      61.5  
## 8 1987      63.2  
## 9 1992      64.2  
## 10 1997      65.0  
## 11 2002      65.7  
## 12 2007      67.0
```

```
gapminder %>%  
  group_by(continent, year) %>%  
  summarise(sum_pop = sum(as.numeric(pop)),  
            mean_pop = mean(pop),  
            mean_edv = mean(lifeExp),  
            n_paises = n()) %>%  
  ggplot(aes(x = year,  
            y = mean_edv,  
            color = continent)) +  
  geom_line()
```

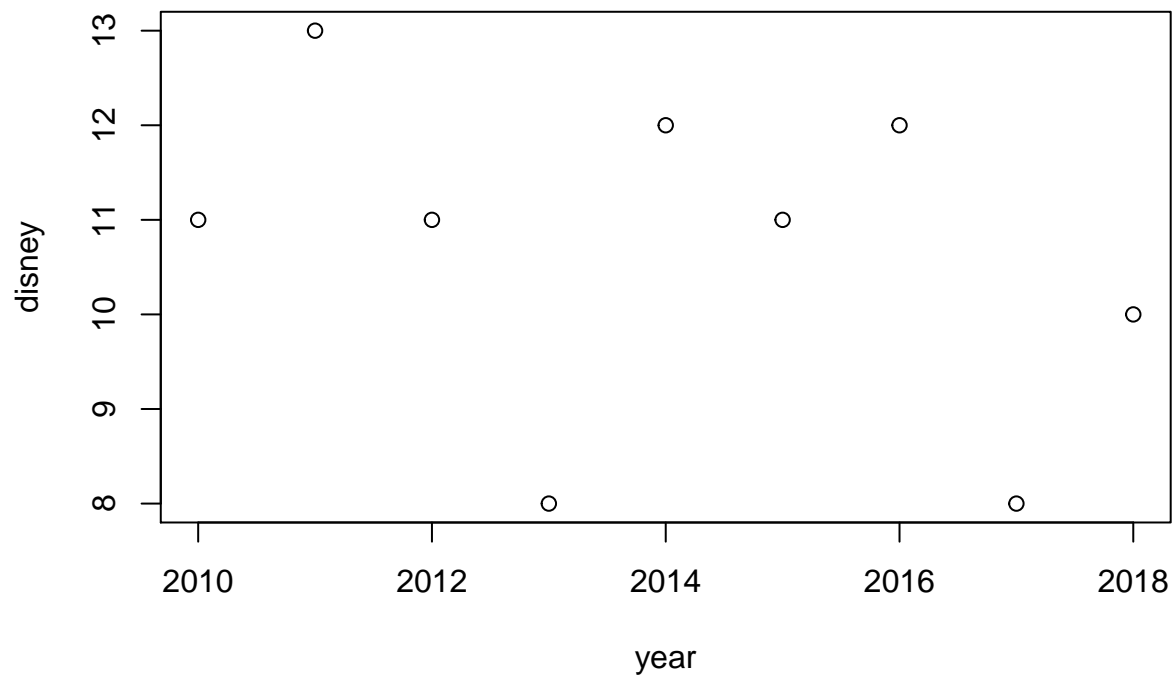
```
## `summarise()` has grouped output by 'continent'. You can override using the `.groups` argument.
```



Uso de ggplot2

```
year <- c('2010', '2011', '2012', '2013', '2014', '2015', '2016', '2017', '2018')
disney <- c(11, 13, 11, 8, 12, 11, 12, 8, 10)

plot(x = year,
     y = disney)
```

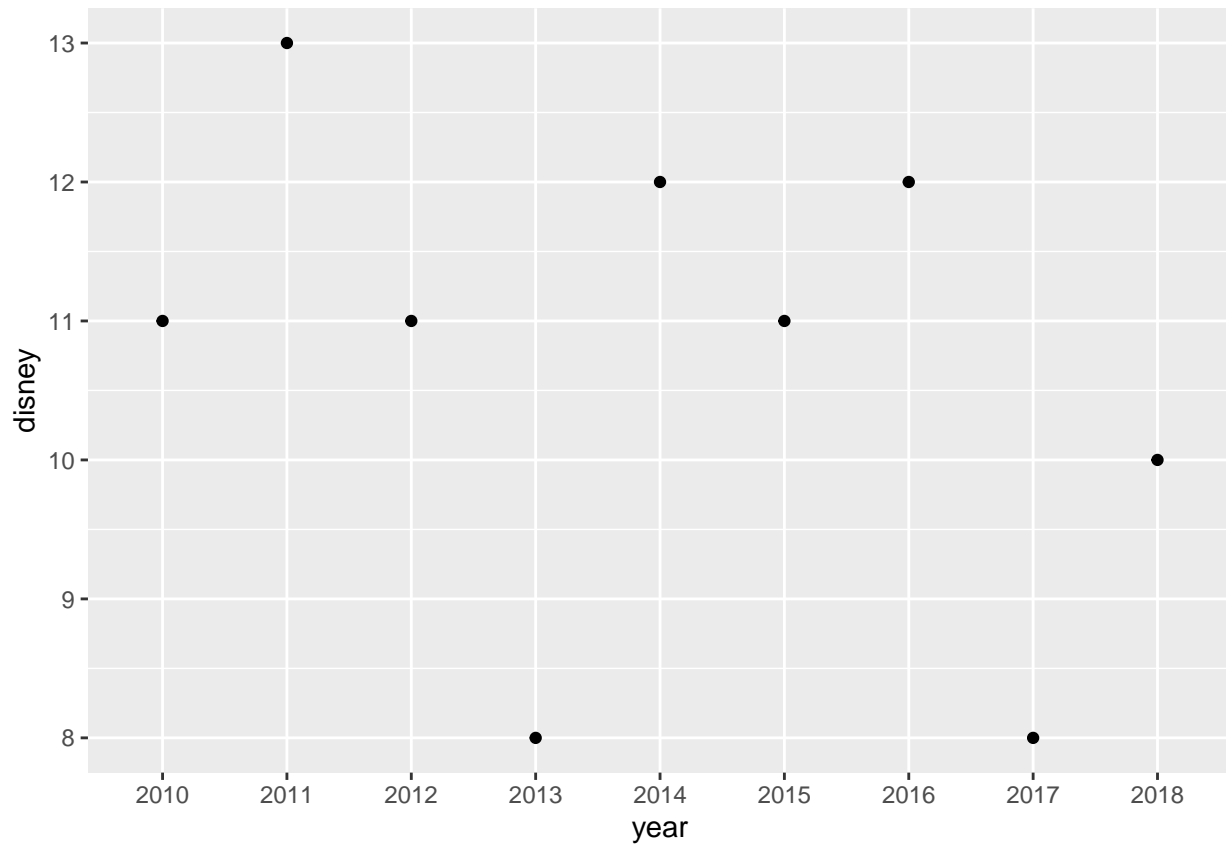


```
peliculas <- data.frame(year,disney)
```

```
kable(peliculas)
```

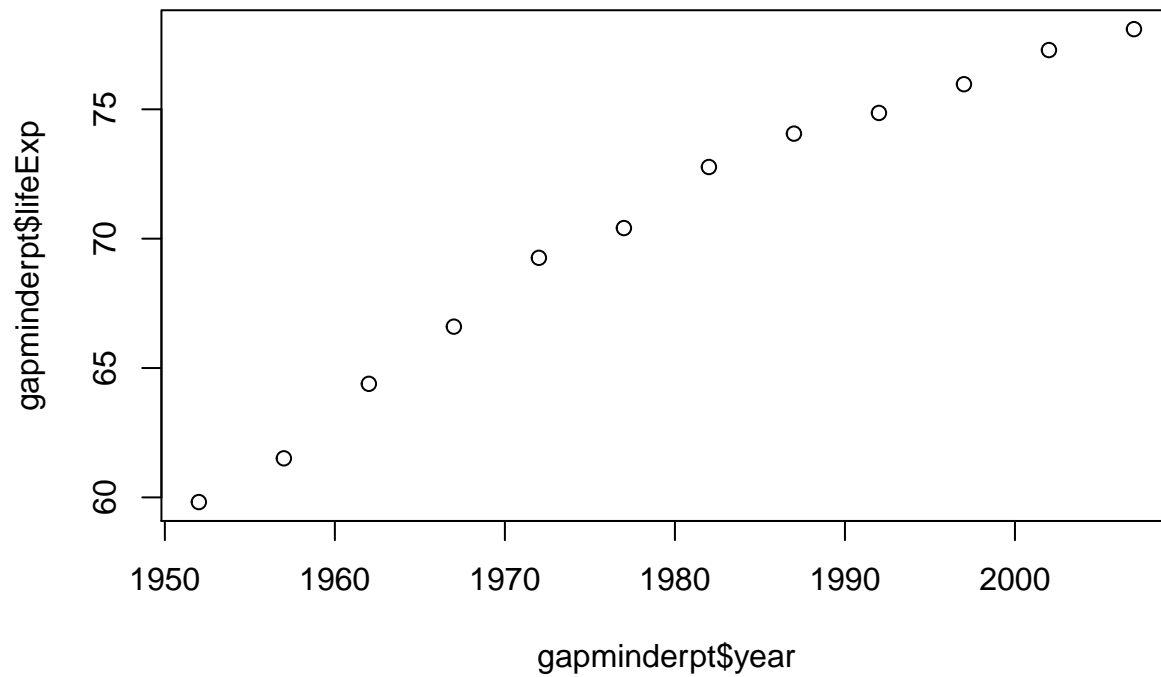
year	disney
2010	11
2011	13
2012	11
2013	8
2014	12
2015	11
2016	12
2017	8
2018	10

```
ggplot(data = peliculas,  
       mapping = aes(x = year, y = disney)) +  
  geom_point()
```

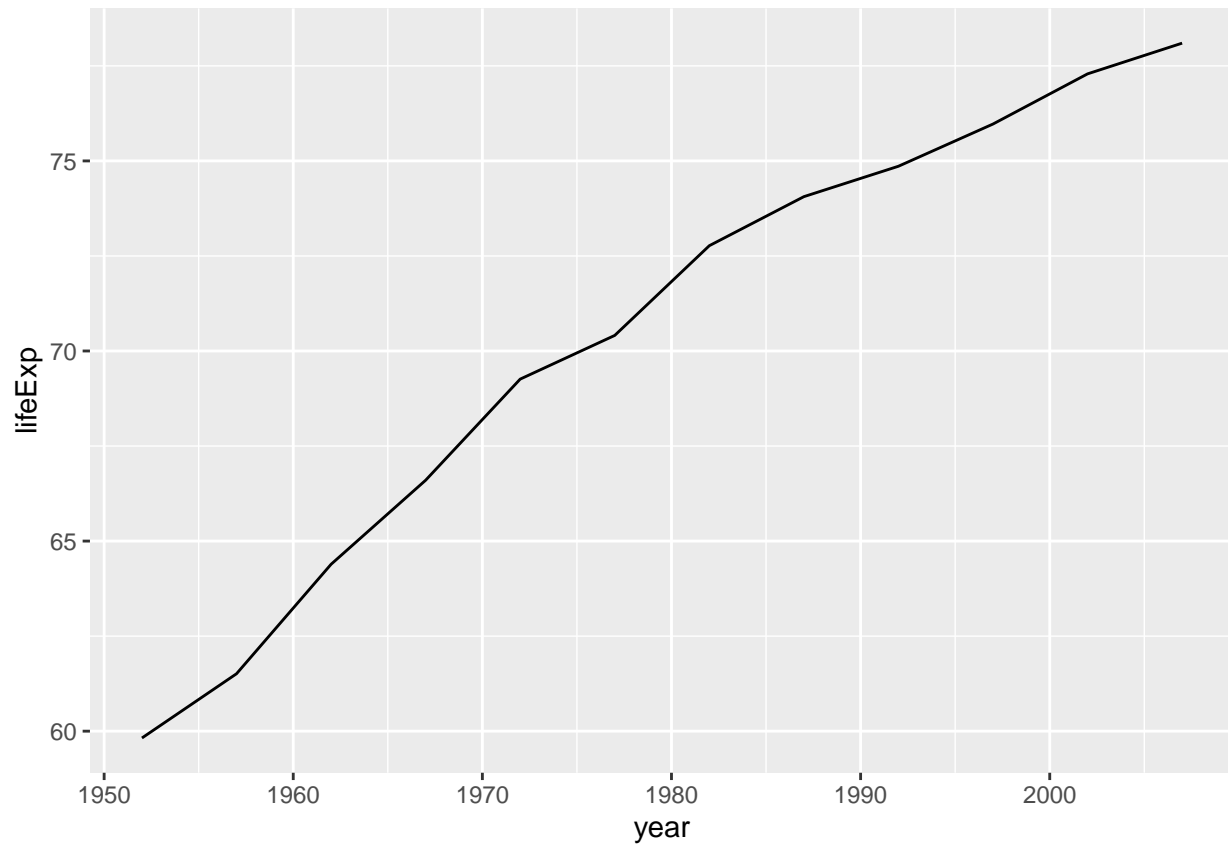


```
gapminderpt <- gapminder %>%
  filter(country == 'Portugal')

plot(x = gapminderpt$year,
     y = gapminderpt$lifeExp)
```



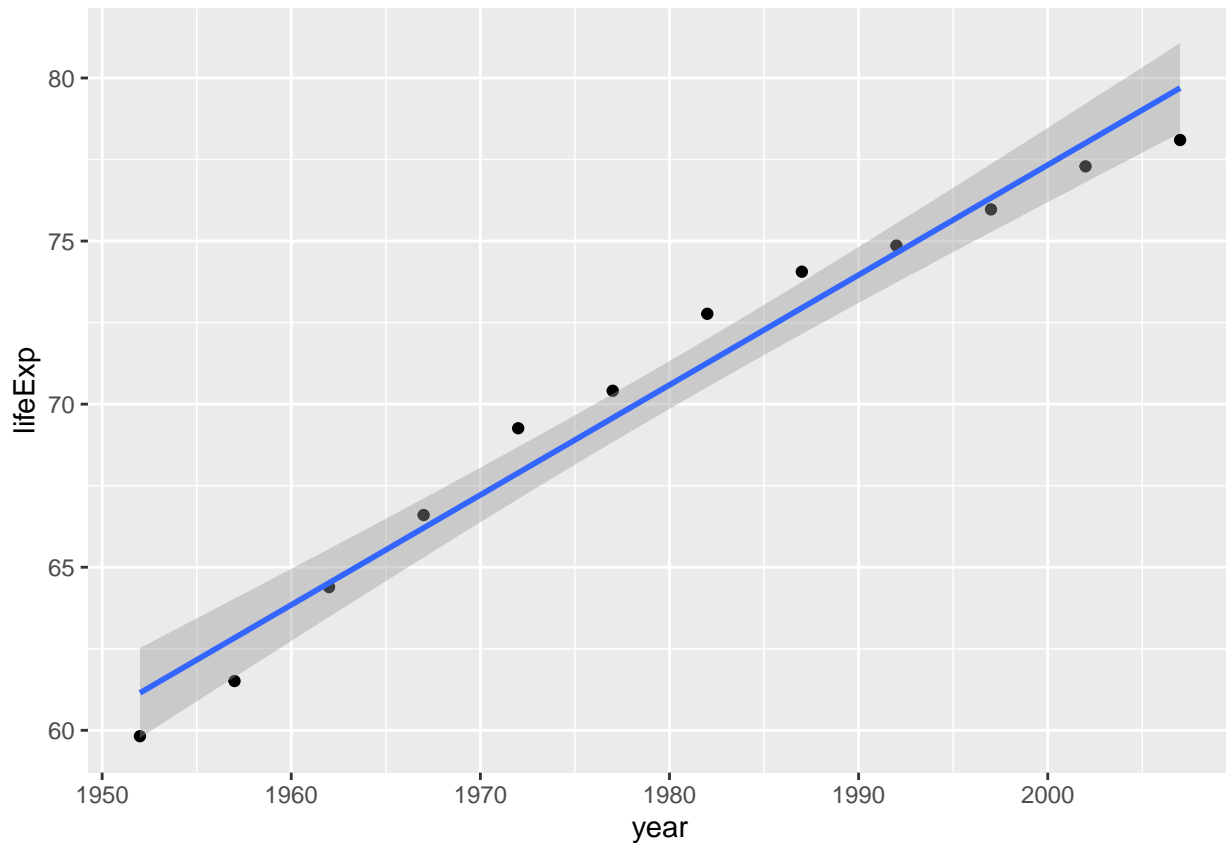
```
ggplot(data = gapminderpt,
       mapping = aes(x = year, y = lifeExp )) +
  geom_line()
```



```
gapminderpt <- gapminder %>%
  filter(country == 'Portugal')

ggplot(data = gapminderpt,
       mapping = aes(x = year, y = lifeExp )) +
  geom_point() +
  geom_smooth(method = 'lm')
```

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



Graficos de barras

```
gapminder2007 <- gapminder %>%
  filter(year == 2007)

kable(gapminder2007)
```

country	continent	year	lifeExp	pop	gdpPercap
Afghanistan	Asia	2007	43.828	31889923	974.5803
Albania	Europe	2007	76.423	3600523	5937.0295
Algeria	Africa	2007	72.301	33333216	6223.3675
Angola	Africa	2007	42.731	12420476	4797.2313
Argentina	Americas	2007	75.320	40301927	12779.3796
Australia	Oceania	2007	81.235	20434176	34435.3674
Austria	Europe	2007	79.829	8199783	36126.4927
Bahrain	Asia	2007	75.635	708573	29796.0483
Bangladesh	Asia	2007	64.062	150448339	1391.2538
Belgium	Europe	2007	79.441	10392226	33692.6051
Benin	Africa	2007	56.728	8078314	1441.2849
Bolivia	Americas	2007	65.554	9119152	3822.1371
Bosnia and Herzegovina	Europe	2007	74.852	4552198	7446.2988
Botswana	Africa	2007	50.728	1639131	12569.8518
Brazil	Americas	2007	72.390	190010647	9065.8008
Bulgaria	Europe	2007	73.005	7322858	10680.7928
Burkina Faso	Africa	2007	52.295	14326203	1217.0330
Burundi	Africa	2007	49.580	8390505	430.0707

country	continent	year	lifeExp	pop	gdpPercap
Cambodia	Asia	2007	59.723	14131858	1713.7787
Cameroon	Africa	2007	50.430	17696293	2042.0952
Canada	Americas	2007	80.653	33390141	36319.2350
Central African Republic	Africa	2007	44.741	4369038	706.0165
Chad	Africa	2007	50.651	10238807	1704.0637
Chile	Americas	2007	78.553	16284741	13171.6388
China	Asia	2007	72.961	1318683096	4959.1149
Colombia	Americas	2007	72.889	44227550	7006.5804
Comoros	Africa	2007	65.152	710960	986.1479
Congo, Dem. Rep.	Africa	2007	46.462	64606759	277.5519
Congo, Rep.	Africa	2007	55.322	3800610	3632.5578
Costa Rica	Americas	2007	78.782	4133884	9645.0614
Cote d'Ivoire	Africa	2007	48.328	18013409	1544.7501
Croatia	Europe	2007	75.748	4493312	14619.2227
Cuba	Americas	2007	78.273	11416987	8948.1029
Czech Republic	Europe	2007	76.486	10228744	22833.3085
Denmark	Europe	2007	78.332	5468120	35278.4187
Djibouti	Africa	2007	54.791	496374	2082.4816
Dominican Republic	Americas	2007	72.235	9319622	6025.3748
Ecuador	Americas	2007	74.994	13755680	6873.2623
Egypt	Africa	2007	71.338	80264543	5581.1810
El Salvador	Americas	2007	71.878	6939688	5728.3535
Equatorial Guinea	Africa	2007	51.579	551201	12154.0897
Eritrea	Africa	2007	58.040	4906585	641.3695
Ethiopia	Africa	2007	52.947	76511887	690.8056
Finland	Europe	2007	79.313	5238460	33207.0844
France	Europe	2007	80.657	61083916	30470.0167
Gabon	Africa	2007	56.735	1454867	13206.4845
Gambia	Africa	2007	59.448	1688359	752.7497
Germany	Europe	2007	79.406	82400996	32170.3744
Ghana	Africa	2007	60.022	22873338	1327.6089
Greece	Europe	2007	79.483	10706290	27538.4119
Guatemala	Americas	2007	70.259	12572928	5186.0500
Guinea	Africa	2007	56.007	9947814	942.6542
Guinea-Bissau	Africa	2007	46.388	1472041	579.2317
Haiti	Americas	2007	60.916	8502814	1201.6372
Honduras	Americas	2007	70.198	7483763	3548.3308
Hong Kong, China	Asia	2007	82.208	6980412	39724.9787
Hungary	Europe	2007	73.338	9956108	18008.9444
Iceland	Europe	2007	81.757	301931	36180.7892
India	Asia	2007	64.698	1110396331	2452.2104
Indonesia	Asia	2007	70.650	223547000	3540.6516
Iran	Asia	2007	70.964	69453570	11605.7145
Iraq	Asia	2007	59.545	27499638	4471.0619
Ireland	Europe	2007	78.885	4109086	40675.9964
Israel	Asia	2007	80.745	6426679	25523.2771
Italy	Europe	2007	80.546	58147733	28569.7197
Jamaica	Americas	2007	72.567	2780132	7320.8803
Japan	Asia	2007	82.603	127467972	31656.0681
Jordan	Asia	2007	72.535	6053193	4519.4612
Kenya	Africa	2007	54.110	35610177	1463.2493
Korea, Dem. Rep.	Asia	2007	67.297	23301725	1593.0655

country	continent	year	lifeExp	pop	gdpPercap
Korea, Rep.	Asia	2007	78.623	49044790	23348.1397
Kuwait	Asia	2007	77.588	2505559	47306.9898
Lebanon	Asia	2007	71.993	3921278	10461.0587
Lesotho	Africa	2007	42.592	2012649	1569.3314
Liberia	Africa	2007	45.678	3193942	414.5073
Libya	Africa	2007	73.952	6036914	12057.4993
Madagascar	Africa	2007	59.443	19167654	1044.7701
Malawi	Africa	2007	48.303	13327079	759.3499
Malaysia	Asia	2007	74.241	24821286	12451.6558
Mali	Africa	2007	54.467	12031795	1042.5816
Mauritania	Africa	2007	64.164	3270065	1803.1515
Mauritius	Africa	2007	72.801	1250882	10956.9911
Mexico	Americas	2007	76.195	108700891	11977.5750
Mongolia	Asia	2007	66.803	2874127	3095.7723
Montenegro	Europe	2007	74.543	684736	9253.8961
Morocco	Africa	2007	71.164	33757175	3820.1752
Mozambique	Africa	2007	42.082	19951656	823.6856
Myanmar	Asia	2007	62.069	47761980	944.0000
Namibia	Africa	2007	52.906	2055080	4811.0604
Nepal	Asia	2007	63.785	28901790	1091.3598
Netherlands	Europe	2007	79.762	16570613	36797.9333
New Zealand	Oceania	2007	80.204	4115771	25185.0091
Nicaragua	Americas	2007	72.899	5675356	2749.3210
Niger	Africa	2007	56.867	12894865	619.6769
Nigeria	Africa	2007	46.859	135031164	2013.9773
Norway	Europe	2007	80.196	4627926	49357.1902
Oman	Asia	2007	75.640	3204897	22316.1929
Pakistan	Asia	2007	65.483	169270617	2605.9476
Panama	Americas	2007	75.537	3242173	9809.1856
Paraguay	Americas	2007	71.752	6667147	4172.8385
Peru	Americas	2007	71.421	28674757	7408.9056
Philippines	Asia	2007	71.688	91077287	3190.4810
Poland	Europe	2007	75.563	38518241	15389.9247
Portugal	Europe	2007	78.098	10642836	20509.6478
Puerto Rico	Americas	2007	78.746	3942491	19328.7090
Reunion	Africa	2007	76.442	798094	7670.1226
Romania	Europe	2007	72.476	22276056	10808.4756
Rwanda	Africa	2007	46.242	8860588	863.0885
Sao Tome and Principe	Africa	2007	65.528	199579	1598.4351
Saudi Arabia	Asia	2007	72.777	27601038	21654.8319
Senegal	Africa	2007	63.062	12267493	1712.4721
Serbia	Europe	2007	74.002	10150265	9786.5347
Sierra Leone	Africa	2007	42.568	6144562	862.5408
Singapore	Asia	2007	79.972	4553009	47143.1796
Slovak Republic	Europe	2007	74.663	5447502	18678.3144
Slovenia	Europe	2007	77.926	2009245	25768.2576
Somalia	Africa	2007	48.159	9118773	926.1411
South Africa	Africa	2007	49.339	43997828	9269.6578
Spain	Europe	2007	80.941	40448191	28821.0637
Sri Lanka	Asia	2007	72.396	20378239	3970.0954
Sudan	Africa	2007	58.556	42292929	2602.3950
Swaziland	Africa	2007	39.613	1133066	4513.4806

country	continent	year	lifeExp	pop	gdpPercap
Sweden	Europe	2007	80.884	9031088	33859.7484
Switzerland	Europe	2007	81.701	7554661	37506.4191
Syria	Asia	2007	74.143	19314747	4184.5481
Taiwan	Asia	2007	78.400	23174294	28718.2768
Tanzania	Africa	2007	52.517	38139640	1107.4822
Thailand	Asia	2007	70.616	65068149	7458.3963
Togo	Africa	2007	58.420	5701579	882.9699
Trinidad and Tobago	Americas	2007	69.819	1056608	18008.5092
Tunisia	Africa	2007	73.923	10276158	7092.9230
Turkey	Europe	2007	71.777	71158647	8458.2764
Uganda	Africa	2007	51.542	29170398	1056.3801
United Kingdom	Europe	2007	79.425	60776238	33203.2613
United States	Americas	2007	78.242	301139947	42951.6531
Uruguay	Americas	2007	76.384	3447496	10611.4630
Venezuela	Americas	2007	73.747	26084662	11415.8057
Vietnam	Asia	2007	74.249	85262356	2441.5764
West Bank and Gaza	Asia	2007	73.422	4018332	3025.3498
Yemen, Rep.	Asia	2007	62.698	22211743	2280.7699
Zambia	Africa	2007	42.384	11746035	1271.2116
Zimbabwe	Africa	2007	43.487	12311143	469.7093