

Aplikacija za sređivanje i vizuelizaciju podataka

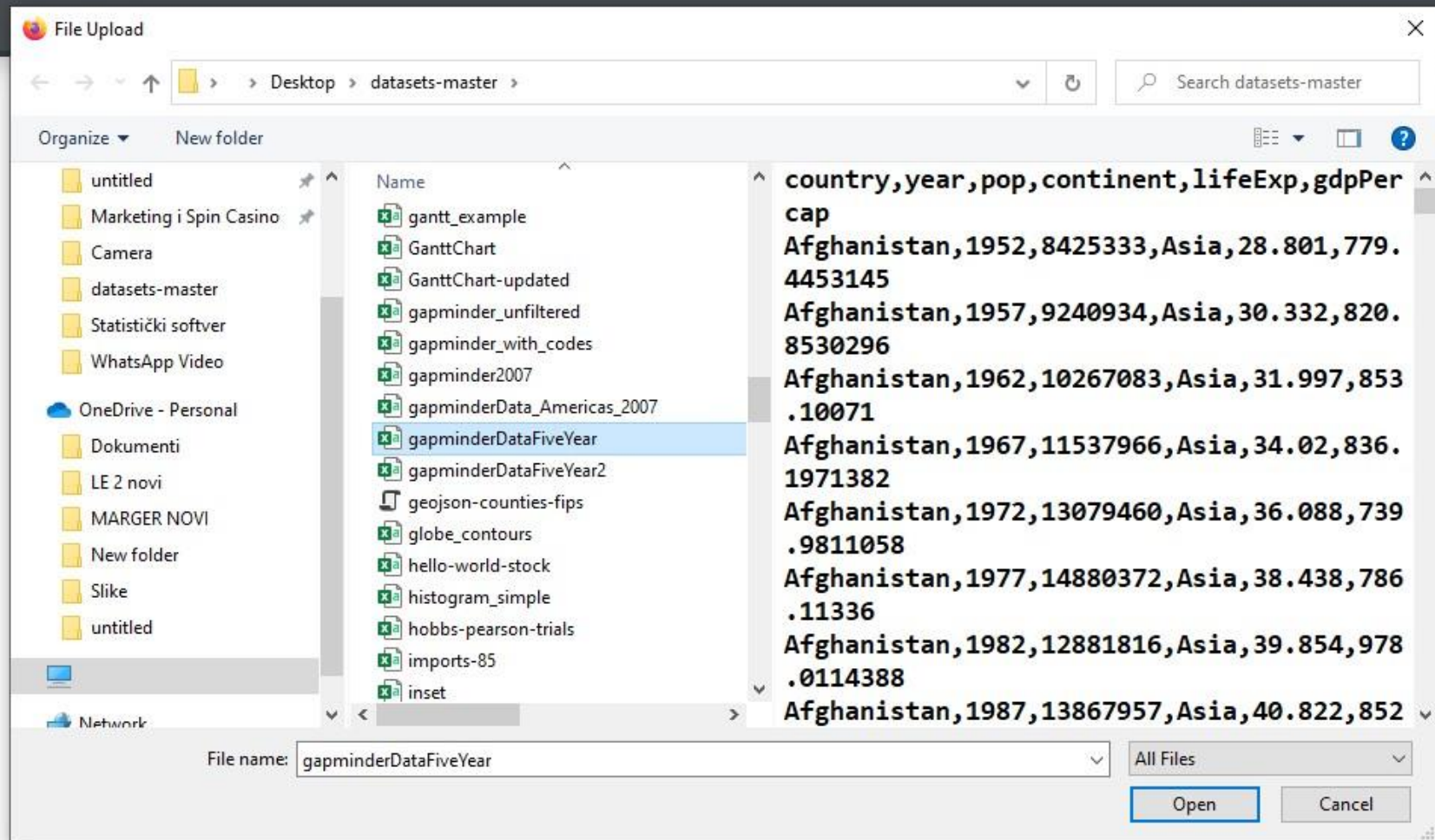
(cloud-based)

Nikola Golubović

Drag and Drop or Select Files

Podatke unosimo
otvaranjem file managera
ili jednostavnim drag&drop

Označimo
csv fajl
koji
želimo da
unesemo
u našu
aplikaciju



Datafly project

Search

Total 6 features

DIMENSIONS

- country
- continent

MEASURES

- pop
- lifeExp
- gdpPercap

DATE

- year

Drag and Drop or Select Files

gapminderDataFiveYear.csv

Preparation Visualisation

Data preview:

country	year	pop	continent	lifeExp	gdpPercap
filter data...					
Afghanistan	1952	8425333	Asia	28.801	779.4453145
Afghanistan	1957	9240934	Asia	30.331999999999997	820.8530296
Afghanistan	1962	10267083	Asia	31.997	853.1007099999999
Afghanistan	1967	11537966	Asia	34.02	836.1971382
Afghanistan	1972	13079460	Asia	36.088	739.9811057999999
Afghanistan	1977	14880372	Asia	38.438	786.11336

1

2

3

1. Po završetku učitavanja, kolone se razvrstavaju po tipu podatka.
(bitno za vizuelizaciju i odabir grafikona)
2. Uvid u podatke koje smo učitali
3. Dva taba, klikom na jedan otvara nam se UI za sređivanje, a za na drugi za predstavljanje podataka

Datify project

Search

Total 6 features

DIMENSIONS

country

continent

MEASURES

pop

lifeExp

gdpPercap

DATE

year

Drag and Drop or Select Files

00gapminderDataFiveYear.csv

Preparation

Visualisation

Data preview:

country	year	pop	continent	lifeExp	gdpPercap
filter data...	= 1952	> 800000	Asia		
Afghanistan	1952	8425333	Asia	28.801	779.4453145
Bangladesh	1952	46886859	Asia	37.484	684.2441716
Cambodia	1952	4693836	Asia	39.417	368.46928560000003
China	1952	556263528	Asia	44	400.44861069999996
Hong Kong, China	1952	2125900	Asia	60.96	3054.421209
India	1952	372000000	Asia	37.373000000000005	546.5657493

<<

<

1

>

>>

<>

2

Imamo mogućnost da filtriramo tabelu, i tako imamo brz uvid u podatke koji zadovoljavaju uslove

Updating...

https://datafly-300602.oa.r.appspot.com

Datafly project

Search

Total 6 features

DIMENSIONS

- country
- continent

MEASURES

- pop
- lifeExp
- gdpPercap

DATE

- year

gapminderDataFiveYear.csv

Preparation

Visualisation

Data preview:

country	year	pop	continent	lifeExp	gdpPercap
filter data...					
Afghanistan	1952	8425333	Asia	28.801	779.4453145
Afghanistan	1957	9240934	Asia	30.331999999999997	820.8530296
Afghanistan	1962	10267083	Asia	31.997	853.1007099999999
Afghanistan	1967	11537966	Asia	34.02	836.1971382
Afghanistan	1972	13079460	Asia	36.088	739.9811057999999
Afghanistan	1977	14880372	Asia	38.438	786.11336

Ukoliko je veliki dataset, poput ovog, par desetina sekunda je potrebno za prikaz „Preparation“ taba. Back deo je implementiran u python-u tako da je vremenska složenost malo veća. Ispis „Updating“ označava aktivan proces u pozadini

gapminderDataFiveYear.csv

Preparation Visualisation

Data preparation

Remove Standardize Rename Column Change type Find & Replace Group By

First select column(s) and then action from buttons above

DIMENSIONS

- country
- continent

MEASURES

- pop
- lifeExp
- gdpPerCap

DATE

- year

TIP

IME KOLONE

BROJ JEDINSTVENIH VREDNOSTI

Vrednost(broj javljanja)

Dimension

country 142

Date

year 12

Measure

pop 1704

Dimension

continent 5

country

- Afghanistan (12)
- Albania (12)
- Algeria (12)
- Angola (12)
- Argentina (12)
- Australia (12)
- Austria (12)
- Bahrain (12)
- Bangladesh (12)
- Belgium (12)
- Benin (12)
- Bolivia (12)
- Bosnia and Herzegovina (12)
- Botswana (12)

year

- 1952 (142)
- 1957 (142)
- 1962 (142)
- 1967 (142)
- 1972 (142)
- 1977 (142)
- 1982 (142)
- 1987 (142)
- 1992 (142)
- 1997 (142)
- 2002 (142)
- 2007 (142)

pop

- 8425333 (1)
- 9240934 (1)
- 10267083 (1)
- 11537966 (1)
- 13079460 (1)
- 14880372 (1)
- 12881816 (1)
- 13867957 (1)
- 16317921 (1)
- 22227415 (1)
- 25268405 (1)
- 31889923 (1)
- 1282697 (1)
- 1476505 (1)

continent

- Asia (396)
- Europe (360)
- Africa (624)
- Americas (300)
- Oceania (24)

- UI za sređivanje podataka.
 - Moguće je:
 1. izbrisati celu kolonu i uzorke gde se javljaju null vrednosti.
 2. Standardizovati zbog statističkih proračuna
 3. Preimenovati kolonu
 4. Promeniti tip (string/int)
 5. Zameniti određene vrednosti u koloni
 6. Grupisati po dimenziji
- Izabrati samo jednu kolonu u padajućem meniju

Total 6 features

DIMENSIONS

- country
- continent

MEASURES

- pop
- lifeExp
- gdpPercap

DATE

- year

Preparation

Visualisation

Data preparation

Remove Standardize Rename Column Change type Find & Replace Group By

2

1

3

Rename column

Life Expectancy

Rename Column

Dimension	Date	Measure	Dimension
country 142	year 12	pop 1704	continent 5
Afghanistan (12)	1952 (142)	8425333 (1)	Asia (396)
Albania (12)	1957 (142)	9240934 (1)	Europe (360)
Algeria (12)	1962 (142)	10267083 (1)	Africa (624)
Angola (12)	1967 (142)	11537055 (1)	Asia (396)

- Klikom na "rename" otvara se forma za preimenovanje kolone

Total 6 features

DIMENSIONS

A country

A continent

MEASURES

* pop

* gdpPercap

* Life Expectancy

DATE

📅 year

Preparation

Visualisation

Data preparation

Remove ▶

Standardize

Rename Column

Change type ▼

Find & Replace ▼

Group By

× continent × ▼

1

2



Measure column for Aggregation



Value:

3

pop



Choose the aggregation function

☒ SUM

☐ AVG

☐ MIN

☐ MAX

☐ Group by and COUNT

4

Group By

5

GRUPIŠEMO PO KONTINENTU
VREDNOST „pop“ (br
populacije) i sumiramo sve
uzorke po odabranoj dimenziji
(kontinentu)

Dimension

country

142

Afghanistan (12)

Albania (12)

Algeria (12)

Angola (12)

Argentina (12)

Australia (12)

Austria (12)

Date

year

12

1952 (142)

1957 (142)

1962 (142)

1967 (142)

1972 (142)

1977 (142)

1982 (142)

Measure

pop

1704

8425333 (1)

9240934 (1)

10267083 (1)

11537966 (1)

13079460 (1)

14880372 (1)

12881816 (1)

Dimension

continent

5

Asia (396)

Europe (360)

Africa (624)

Americas (300)

Oceania (24)

Datafly project

Search

Total 6 features

DIMENSIONS

country

continent

MEASURES

pop

gdpPercap

Life Expectancy

DATE

year

Remove

Standardize

Group by continent (SUM)

SUM_continent	SUM_pop
Africa	6187585961
Americas	7351438499
Asia	30507333902
Europe	6181115304
Oceania	212992136

Measure column for A

Value

pop

Choose the aggreg

☒ SUM

☐ AVG

☐ MIN

☐ MAX

☐ Group by and COUNT

Group By

Dimension

country

142

Afghanistan (12)

Albania (12)

Date

year

12

1952 (142)

1957 (142)

Measure

pop

1704

8425333 (1)

9240934 (1)

Dimension

continent

5

Asia (396)

Europe (360)

Total 6 features

DIMENSIONS

A country

A continent

MEASURES

* pop

* gdpPerCap

* Life Expectancy

DATE

📅 year

Drag and Drop or Select Files

gapminderDataFiveYear.csv

2

Preparation

Visualisation

Color

Select...

Detail

Select...

Size

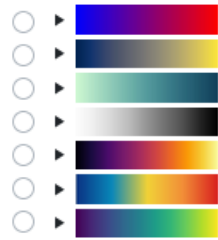
Select...

Adjust size



Filter data

Select...



Columns

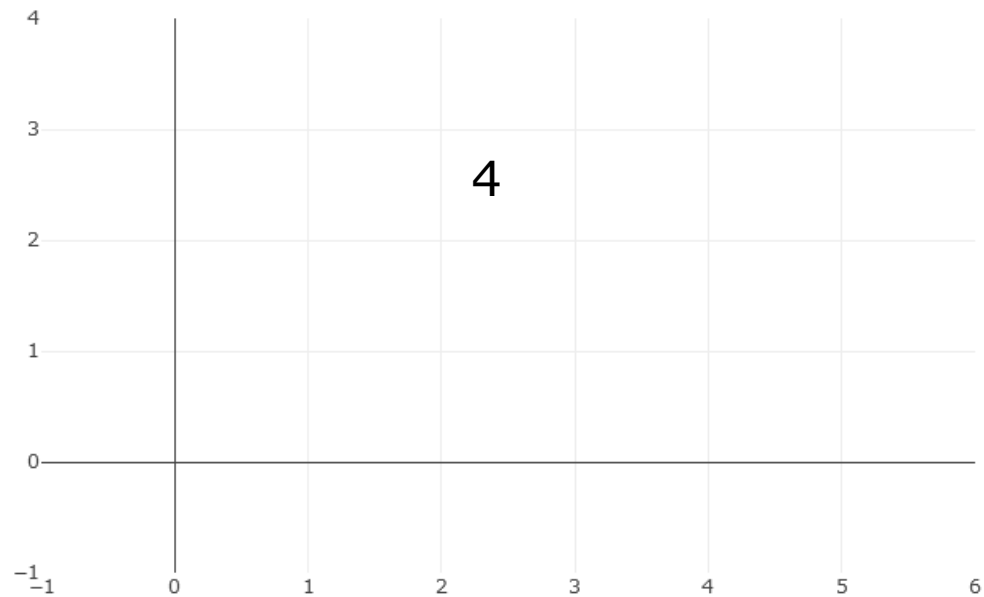
Select...

Rows

Select...

Check for chart

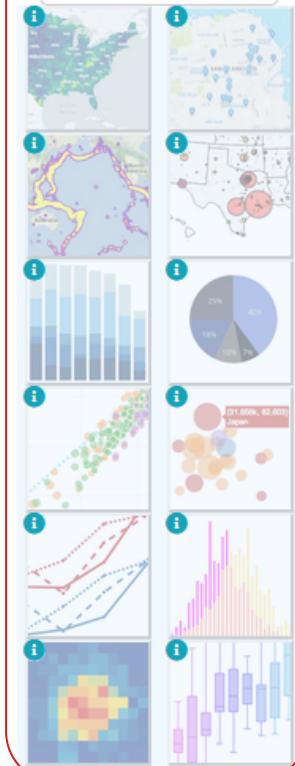
1



3

If coordinates aren't available:

choose country/code



Legenda prethodne slike

- 1. Padajući meniji za selekciju vrednosti iz kolona koje želimo da istražimo grafikonima
- 2. Sidebar koji nam omogućava da vizuelno delimo i prikazujemo podatke
- 3. Kada izaberemo vrednosti "columns" i "rows" klikom na "check for charts" aplikacija u pozadini ispituje koje grafikone možemo da prikazemo za date vrednosti. Ukoliko grafikon možemo da prikazemo, slika povećava svoju vidljivost (opacity) i omogućava klik na sliku. Za svaki grafikon imamo ikonicu "info", gde se klikom na nju otvaraju informacije o grafikonu i koje to vrednosti su potrebne za njegovo prikazivanje.
- 4. Prostor za grafikon



- Brojke oznacavaju redosled klikova. Posle svake promene u sidebar delu, potrebno je ponovo kliknuti na sliku grafikona kako bi se novi generisao

Color

continent

Columns

continent

Rows

1.1

pop

1

2

Detail

Select...

Check for chart

Size

Select...

Adjust size

Filter data

year

4

1952

1957

1962

1967

1972

1977

1982

1987

1992

1997

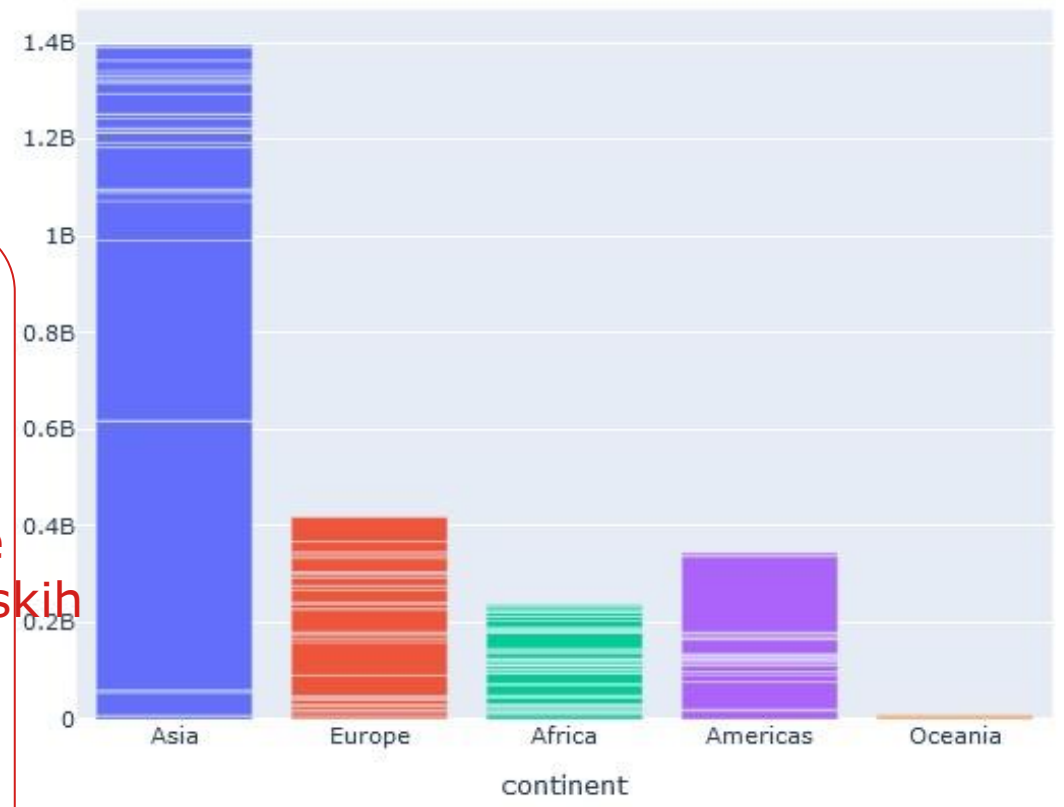
2002

2007

5

Filter

Filtriranje
kategorijskih
vrednosti



continent

Asia

Europe

Africa

Americas

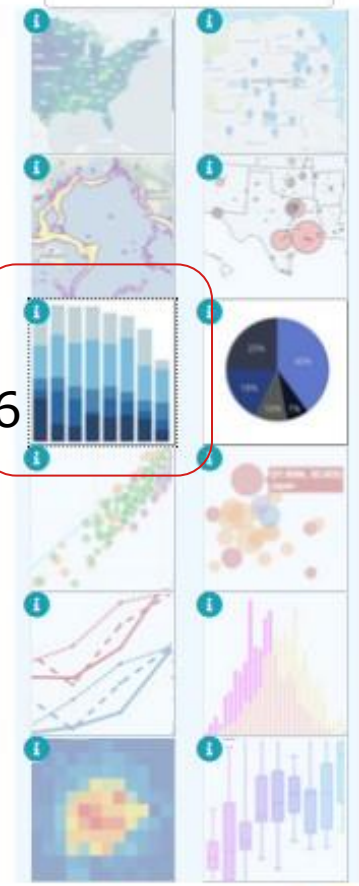
Oceania

If coordinates aren't available (1,2 & 4 type of maps):

choose country/code

3

6



2

Color

pop

Detail

Select...

Size

Select...

Adjust size

Filter data

Select...



Data preview:

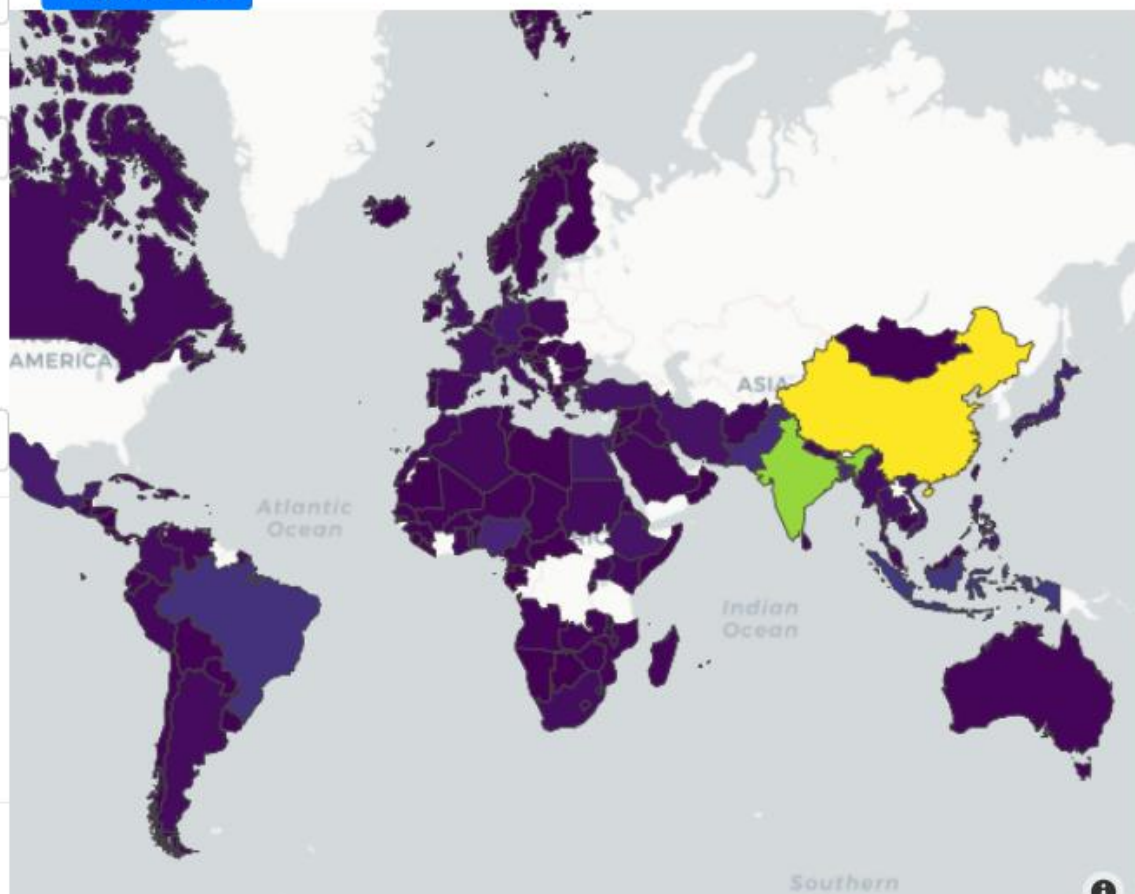
Columns

Select...

Rows

Select...

Check for chart

Procitati info

pop

1.2B

1B

0.8B

0.6B

0.4B

0.2B

If coordinates aren't available:

country





2

Color

continent

Columns

Select...

Rows

Select...

Detail

Select...

Check for chart

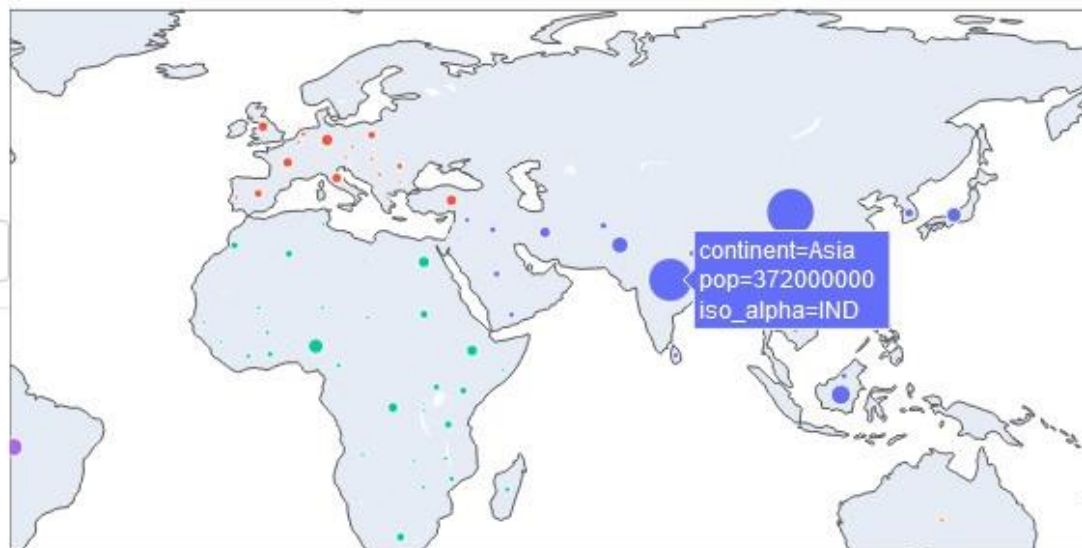
Size

pop

Adjust size

Filter data

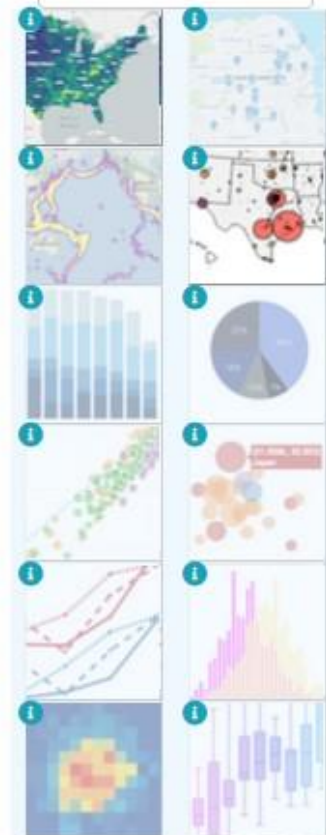
Select...



If coordinates aren't available:

iso_alpha

1



4

Data preview:



Preparation

After changing any of parameters below, click again on CHART IMAGE at right for rendering the new graph

Color

lifeExp

Detail

lifeExp
country

Size

Select...

Adjust size

Filter data

lifeExp

23.599

82.603

Filter

Deselect, and press button first to undo filtering

Columns

gdpPercap

Rows

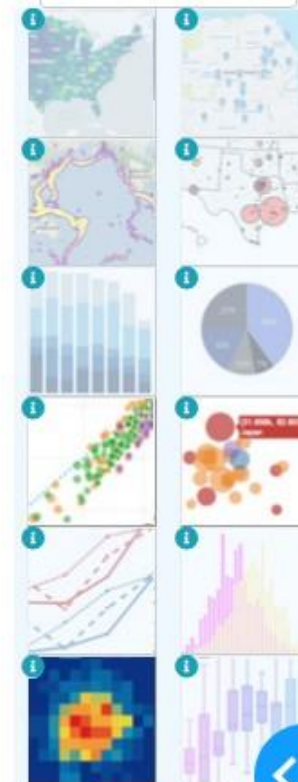
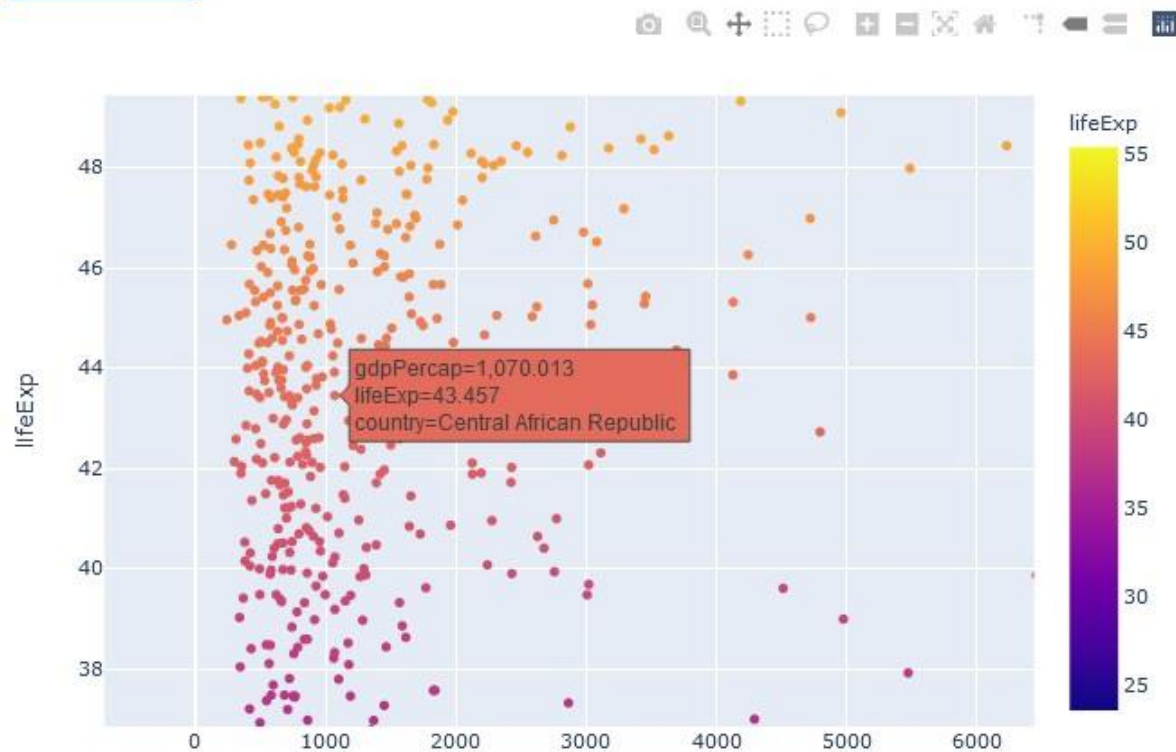
lifeExp

Check for chart

Visualisation

If coordinates aren't available (1,2 & 4 type of maps):

choose country/code



Search

After changing any of parameters below, click again on CHART IMAGE at right for rendering the new graph

Color

Select...

Columns

x continent

Rows

x pop

Check for chart

Detail

x lifeExp

x country

Size

Select...

Adjust size

Filtriranje numerickih vrednosti

Filter data

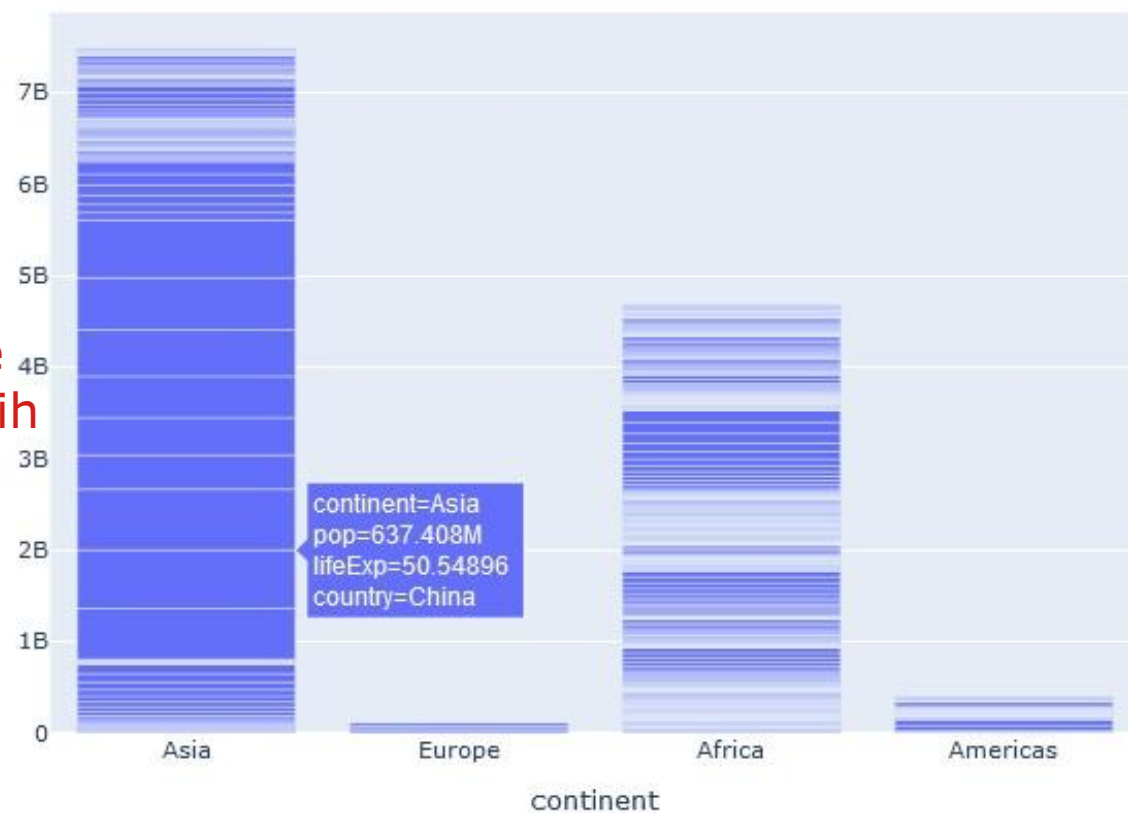
x lifeExp

23.599

82.603

Filter

Deselect, and press button first to undo filtering



If coordinates aren't available (1,2 & 4 type of maps):

choose country/code



Moguće je zumiranje, označavanje pojedinih vrednosti (prostora) grafikona, pomerati zumiran. Takođe sačuvati ga kao png sliku, i sl...

