vizualizacija podataka

šta je to podatak ?

### tipovi podataka

- nominalni
- numerički
  - diskretni
  - ∘ kontinualni

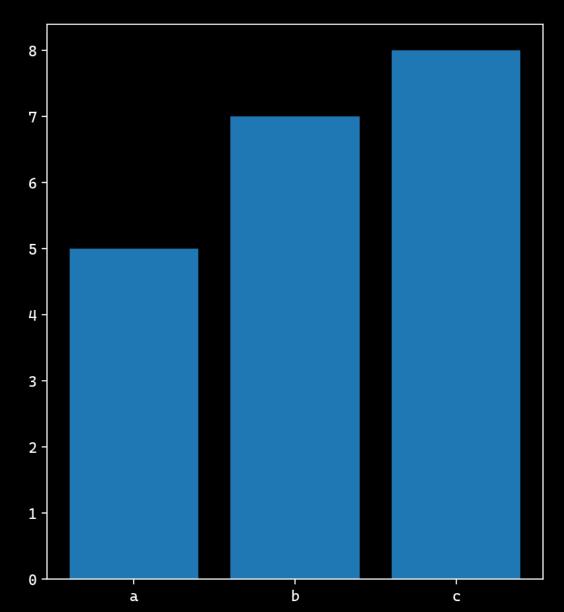
šta je vizualizacija ?

## tipovi grafika

- dvodimenzionalni
- trodimenzionalni
- n-dimenzionalni ?

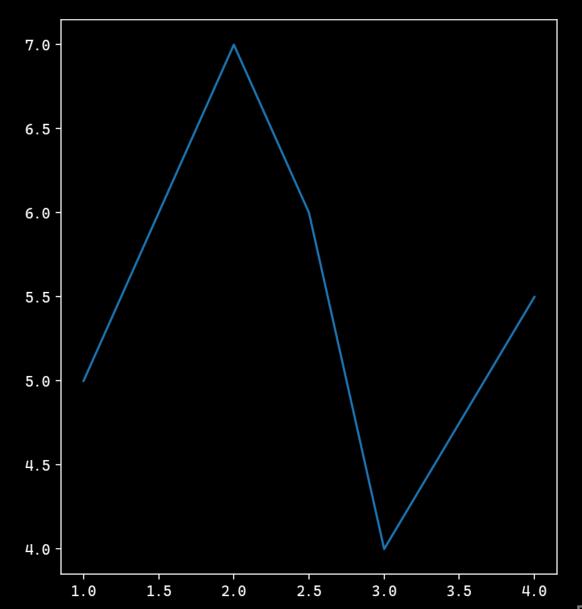
bar plot

• nom x kont



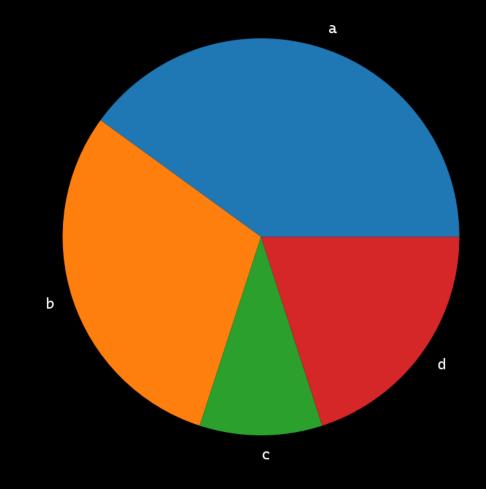
### line plot

- dis → kont
- kont → kont



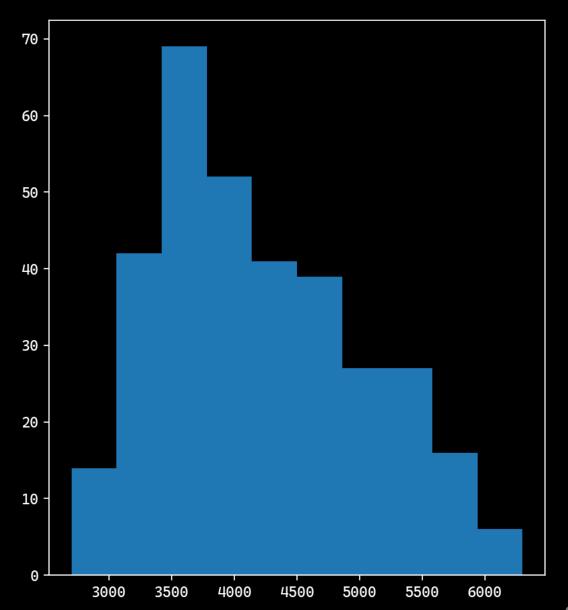
pie plot

• nikad



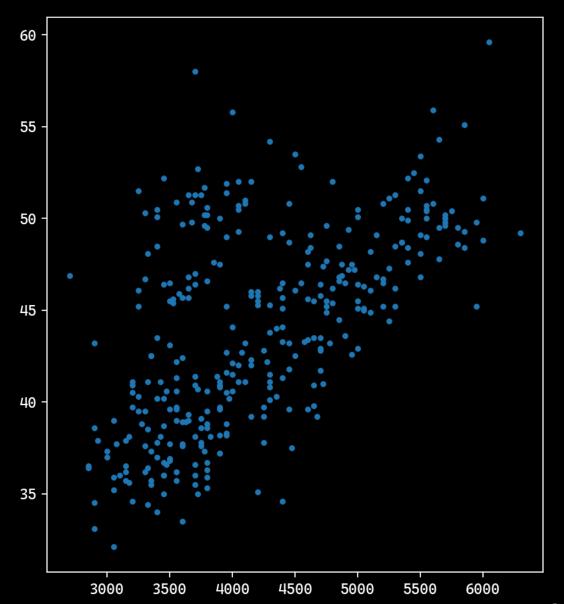
### histogram

• [ kont ]



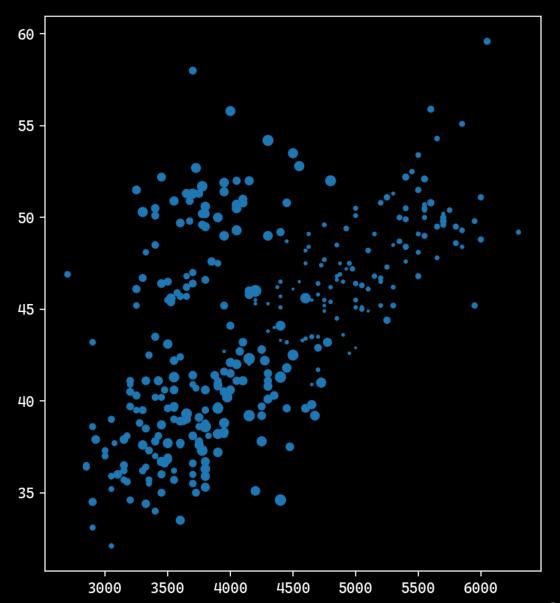
#### scatter plot

• [ kont x kont ]

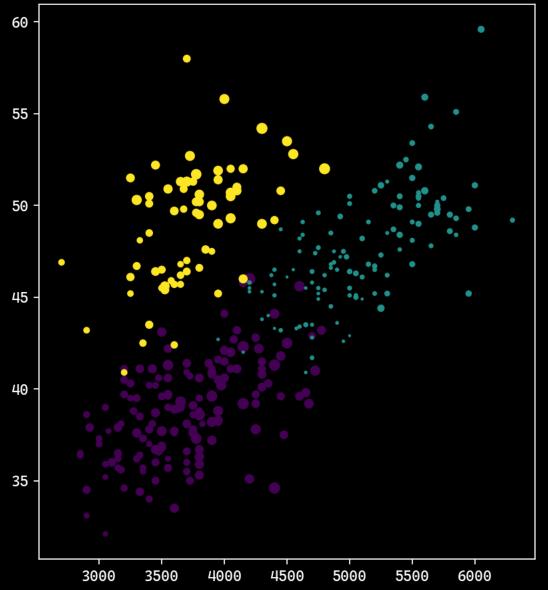


#### scatter plot ++

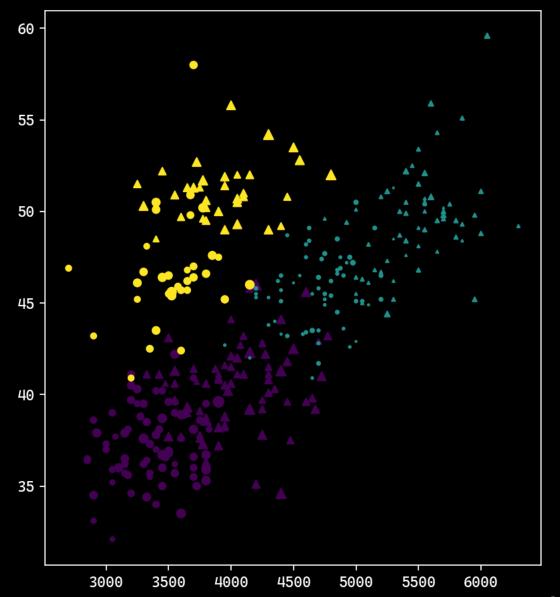
• [ kont x kont x kont ]



scatter plot +++

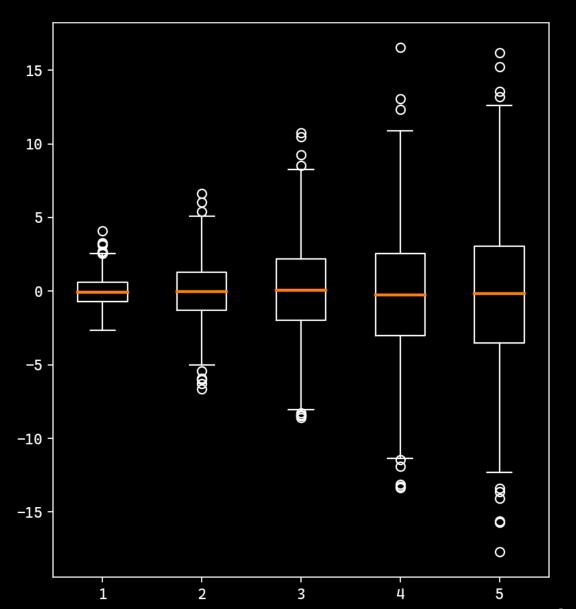


scatter plot ++++

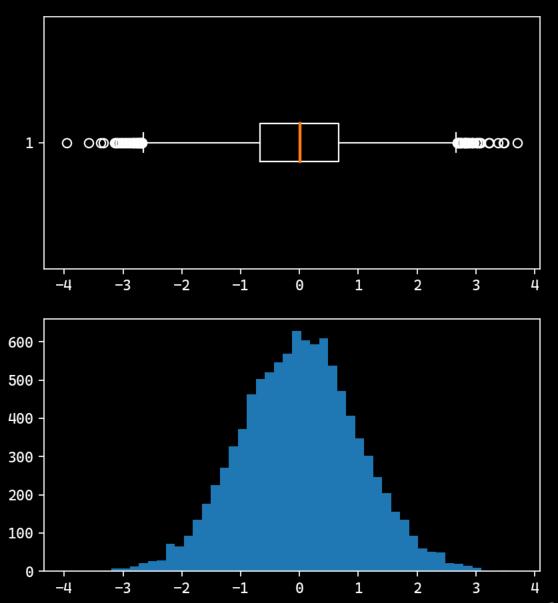


### box plot

- [ kont ]
- bitna raspodela

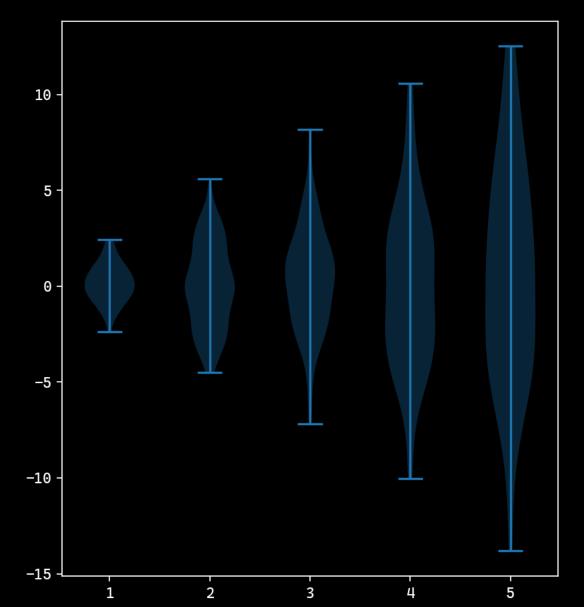


box plot - explained



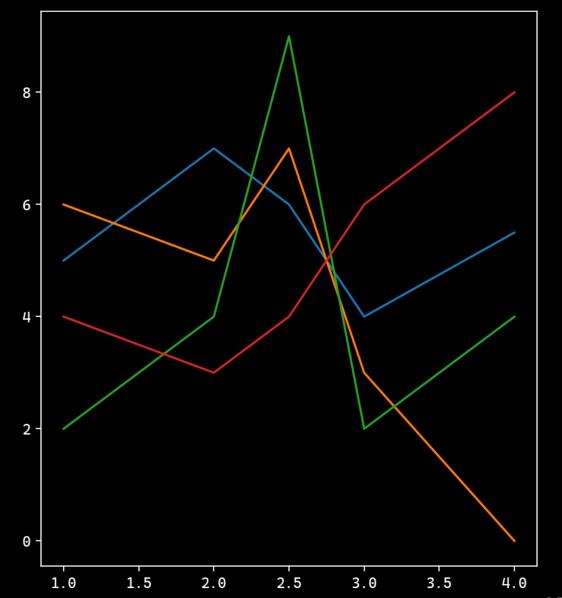
### violin plot

- [ kont ]
- *bitna* raspodela

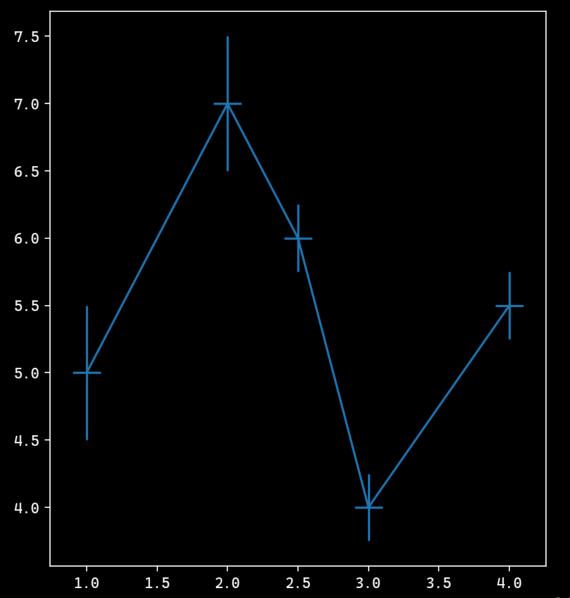


### serijski podaci

- nom → ...
- nom x ...

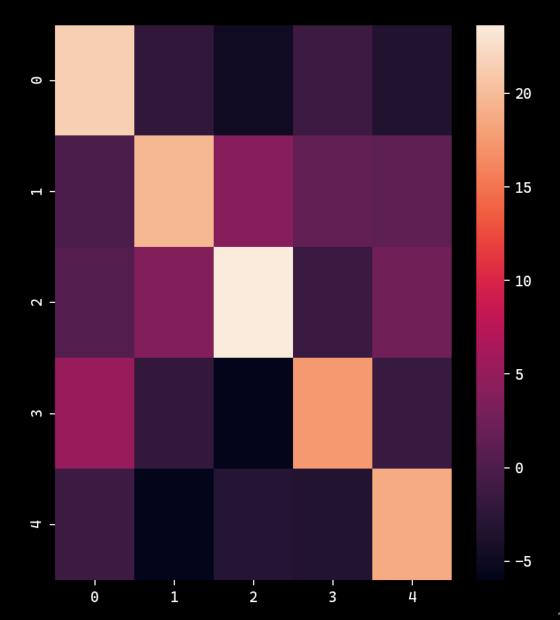


podaci sa greškama



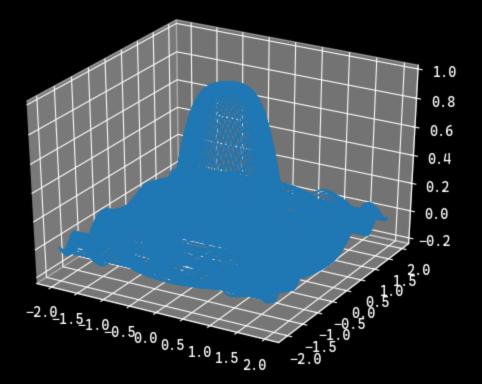
### heatmap

• (nom x nom)  $\rightarrow$  kont



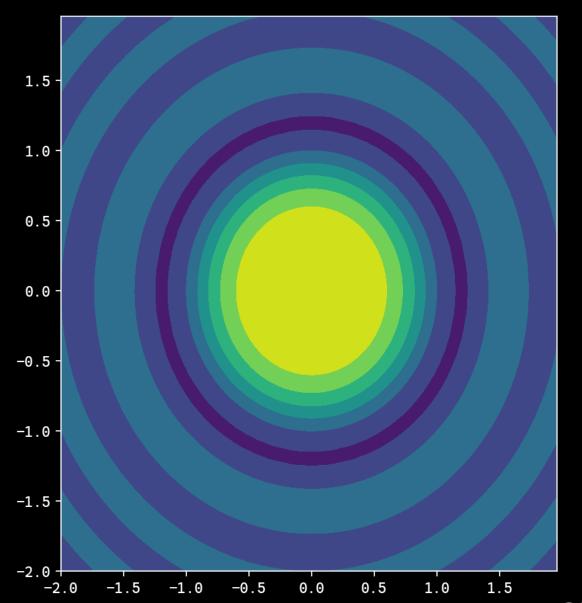
3d plot

• nikad

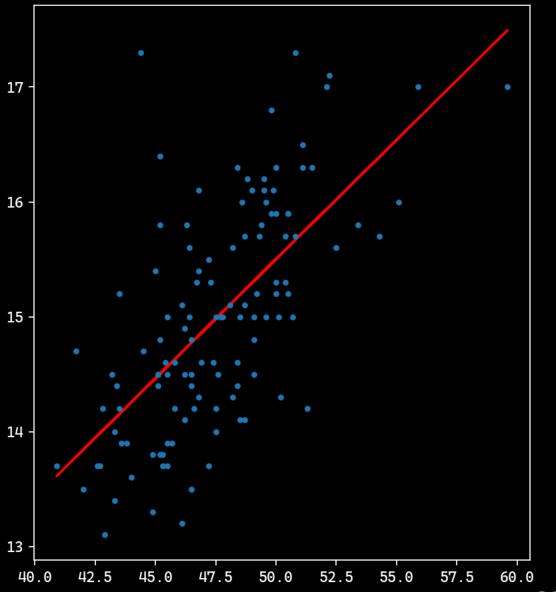


#### contour plot

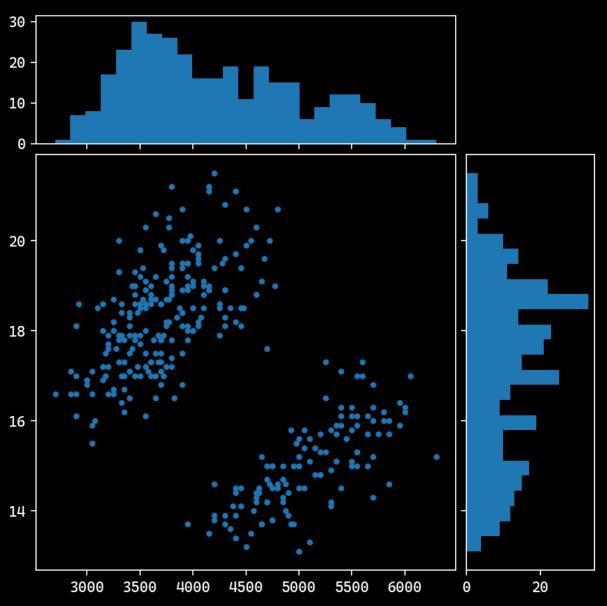
• (kont x kont) → kont

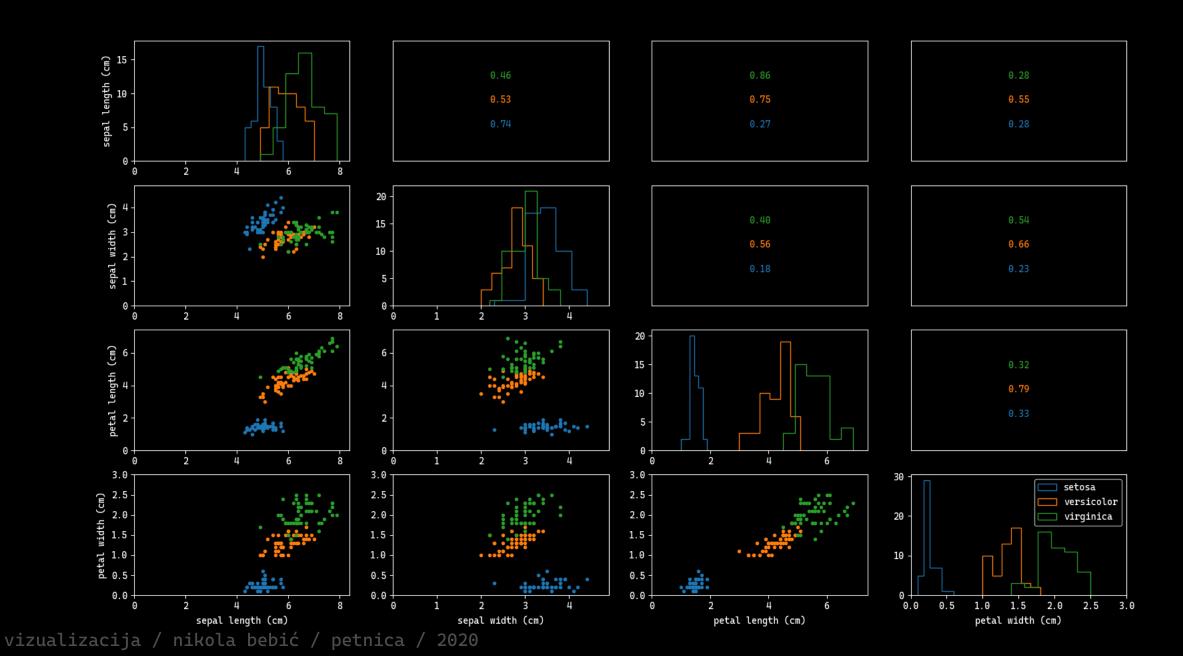


## linearni fit



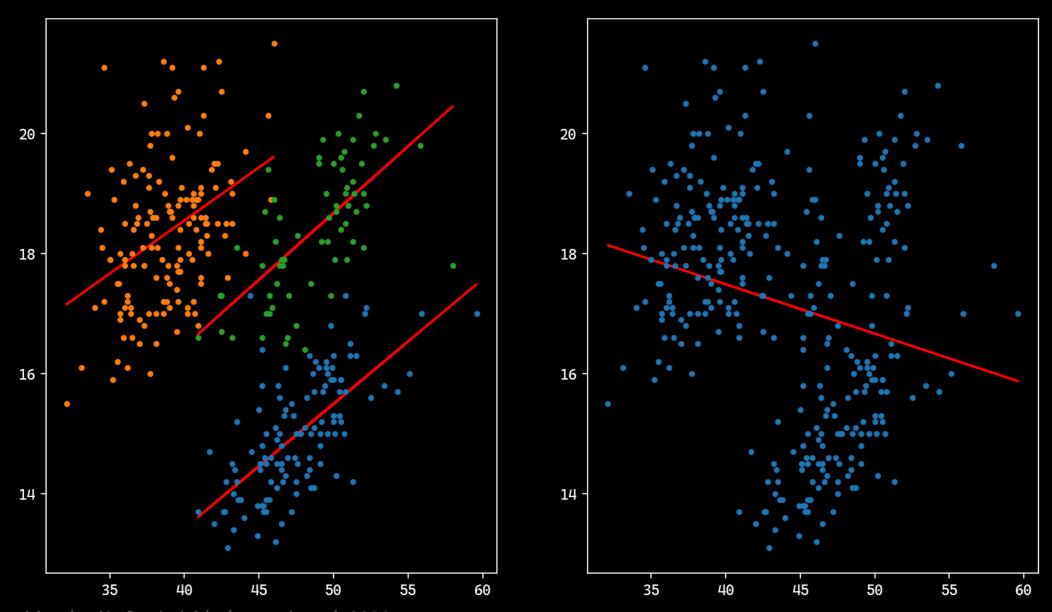
# više plotova odjednom





"friziranje" podataka

simpsonov paradoks



p-fitovanje

