



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Biostatistics BT2023

Lecture 4 : plotting and DATA visualization

Himanshu Joshi 18 August 2023



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Extra points

Keyboard's marking keys

Website making



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Revision from previous lecture

Bar plot

Pie chart

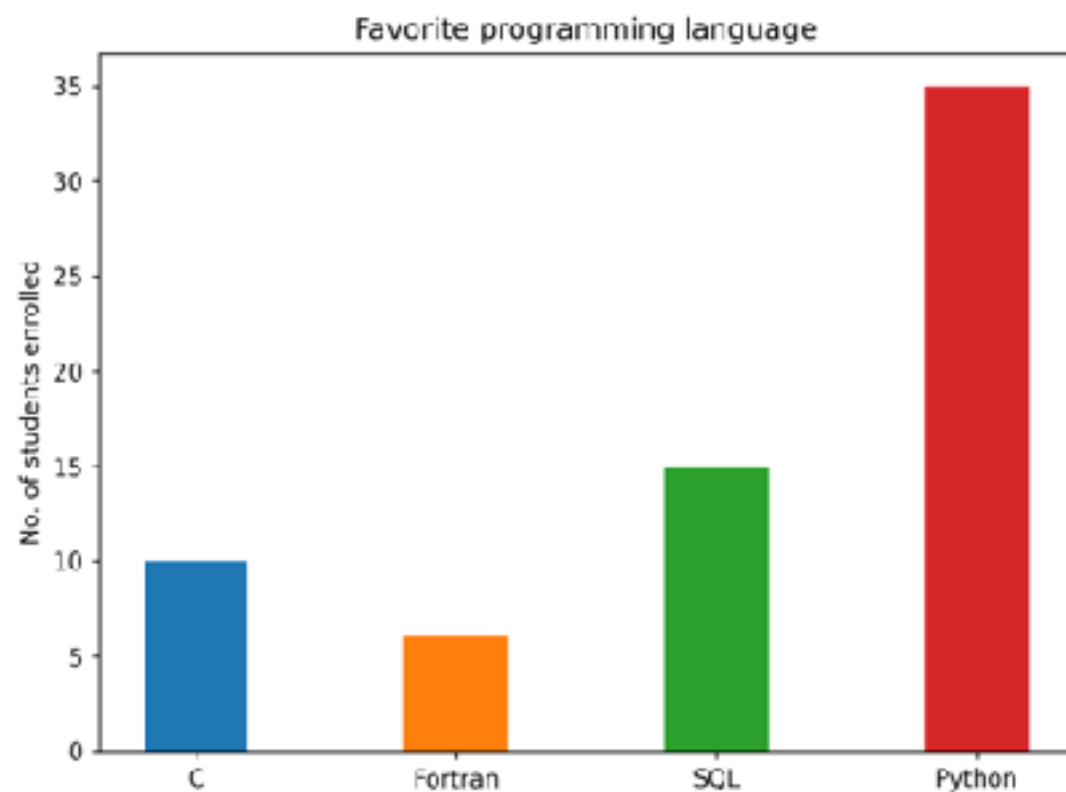
Line plot

Bar plot vs Histogram

A bar graph is the graphical representation of categorical data using rectangular bars where the length of each bar is proportional to the value they represent.

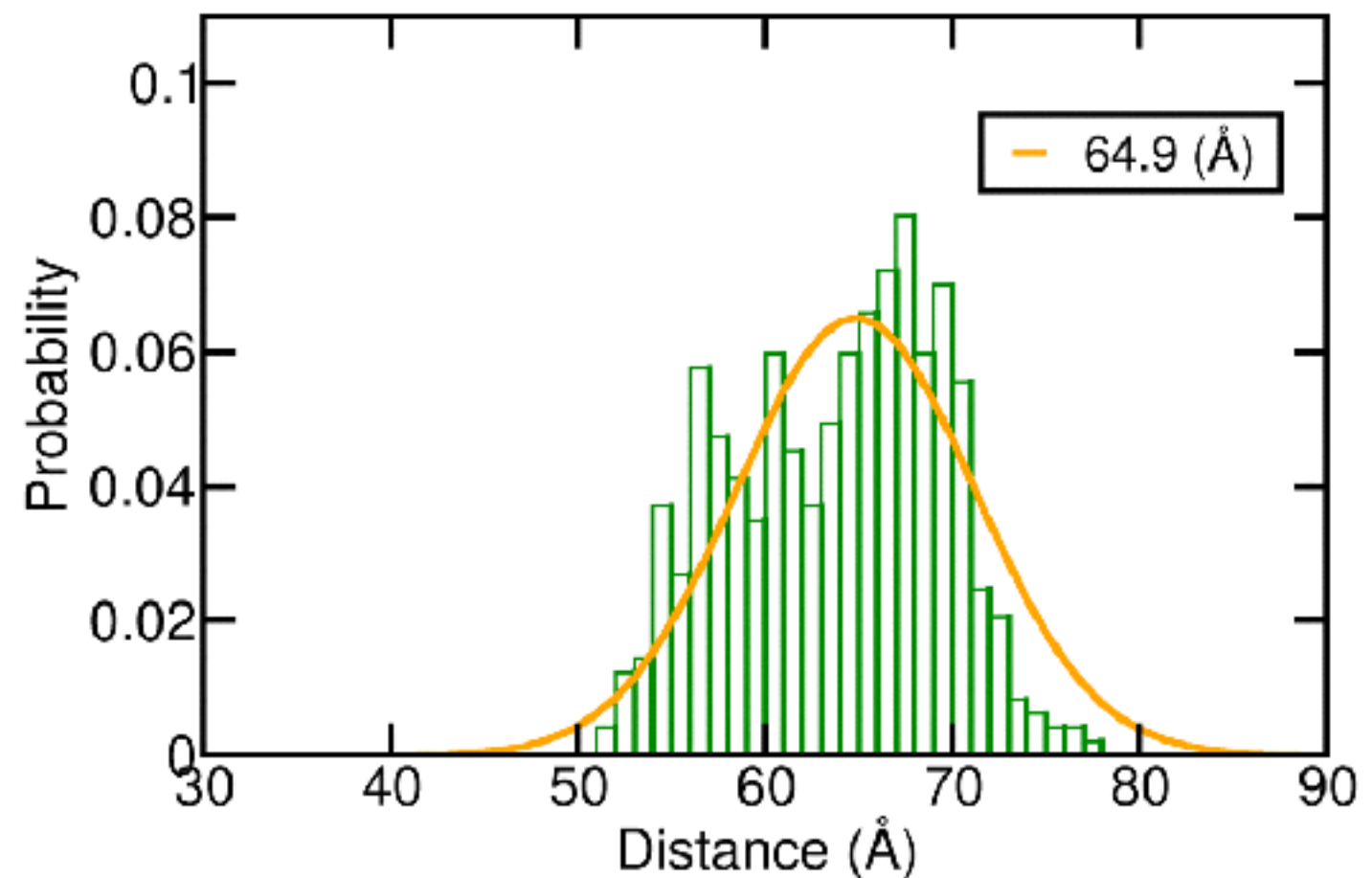
A histogram is the graphical representation of data where data is grouped into continuous number ranges

Bar plot



diagrammatic comparison of
discrete variables

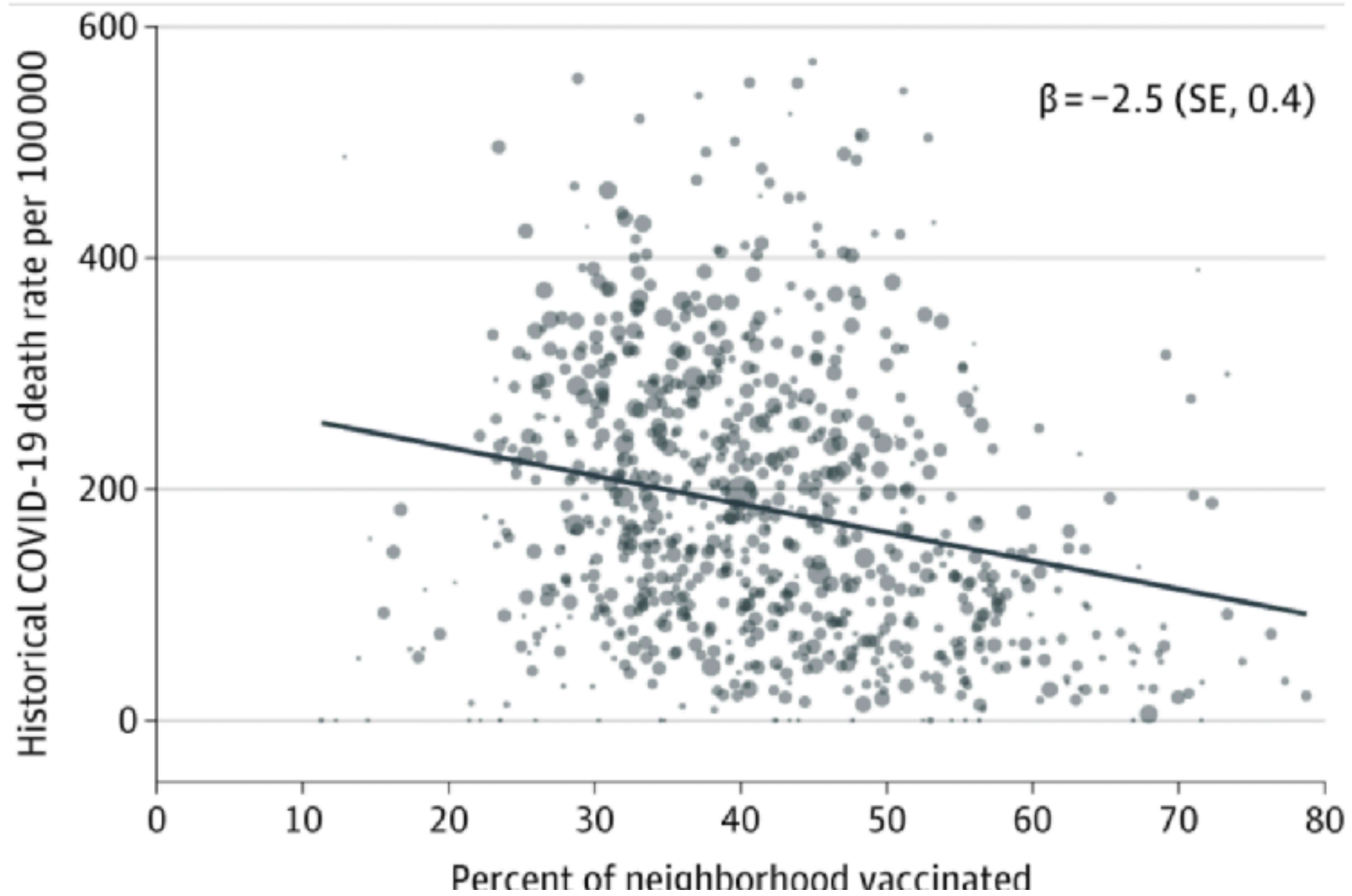
Histogram



frequency distribution of
continuous variables.



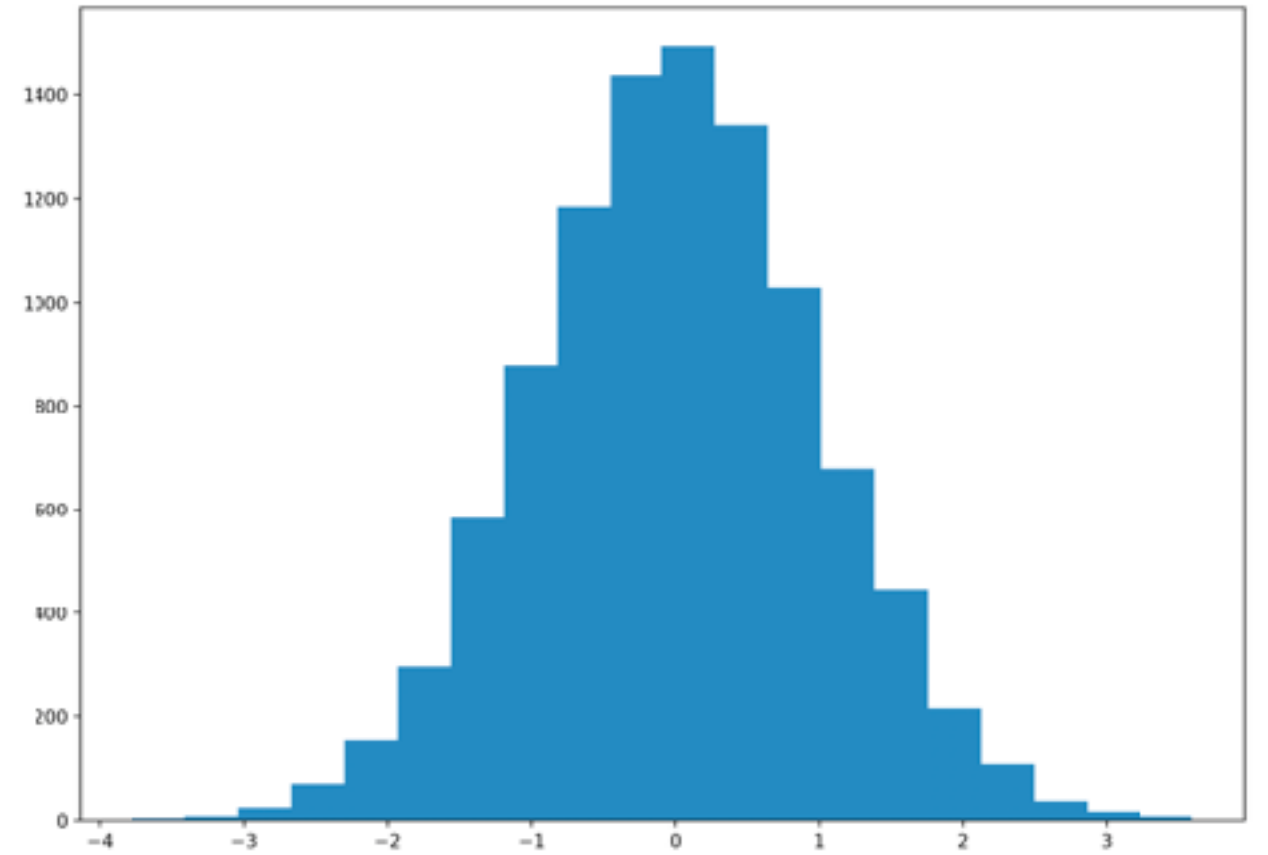
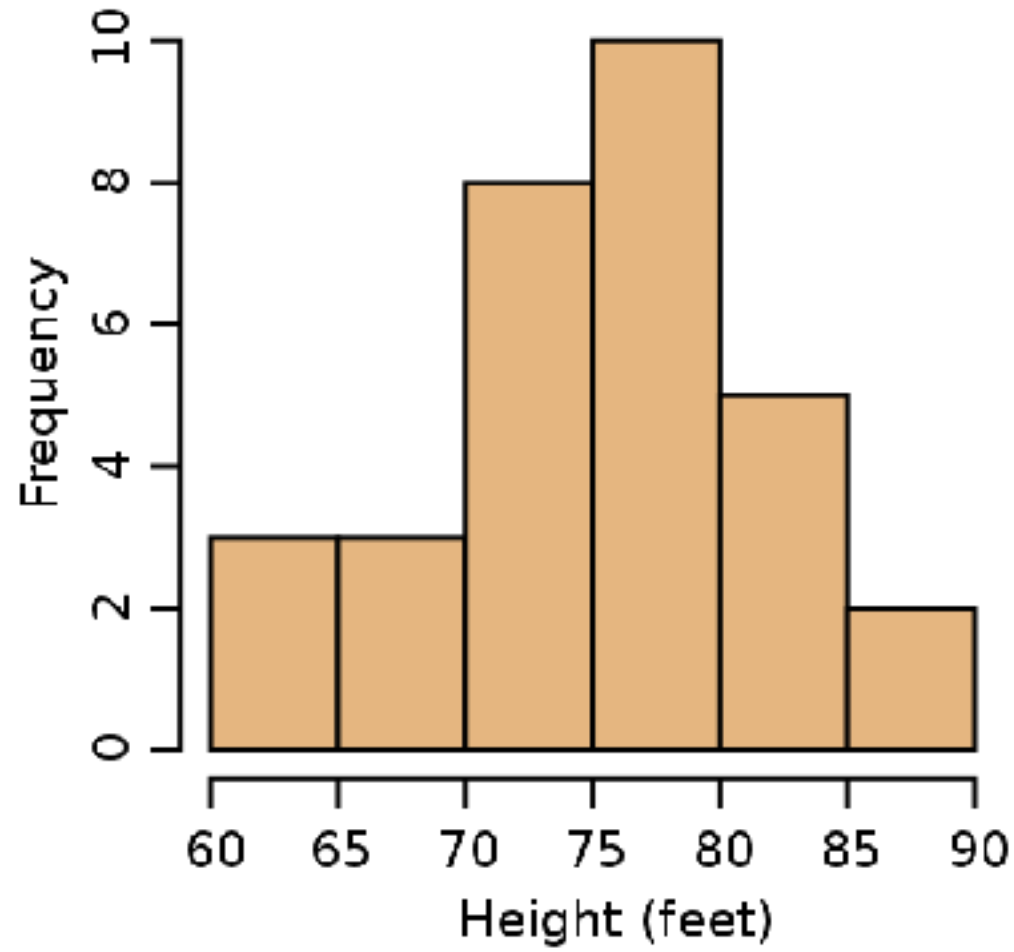
Scatter plot





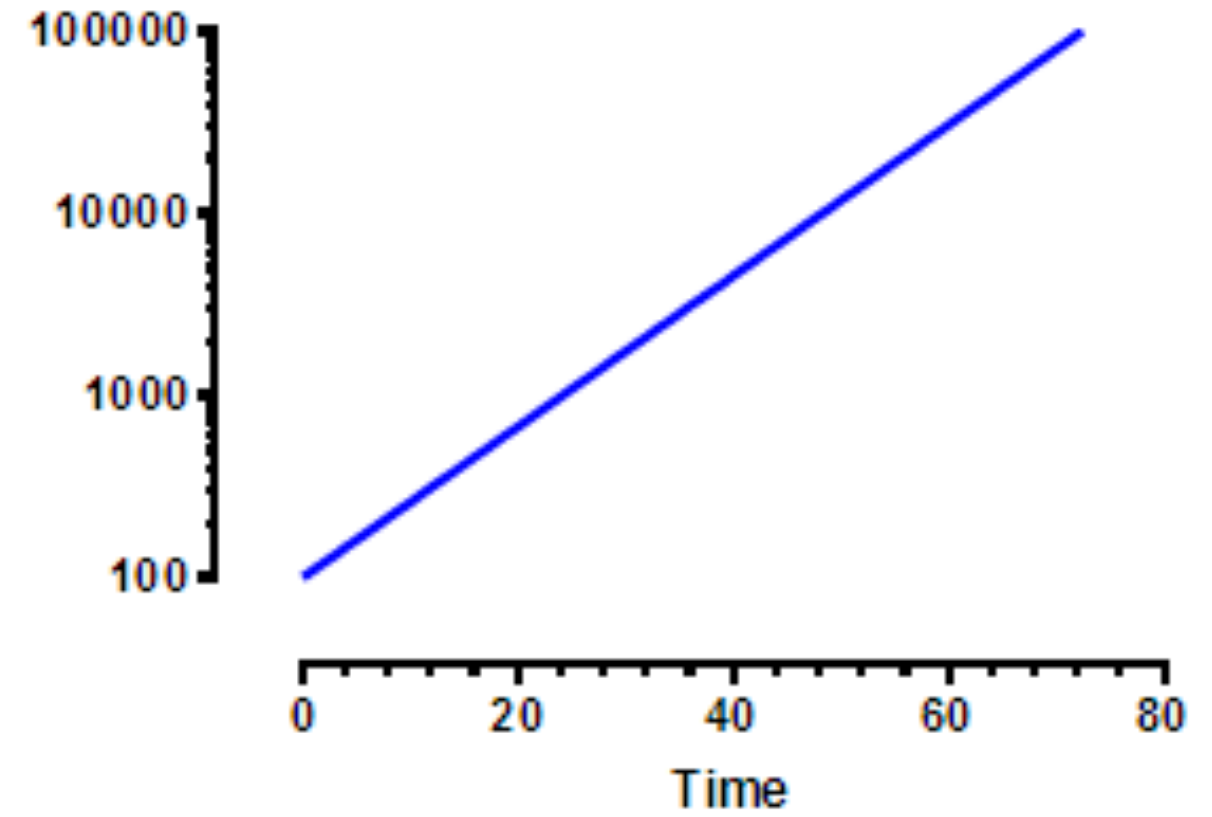
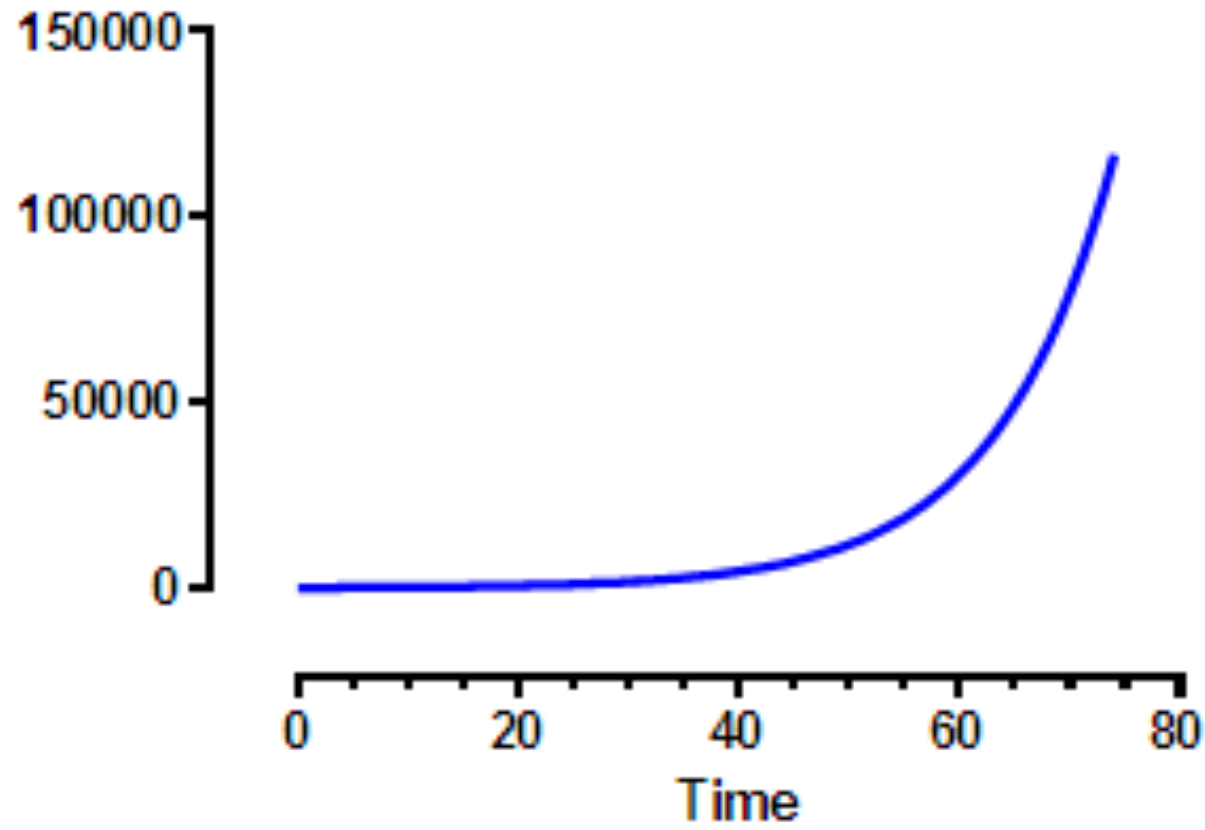
Histogram

Heights of Black Cherry Trees





Log log scale



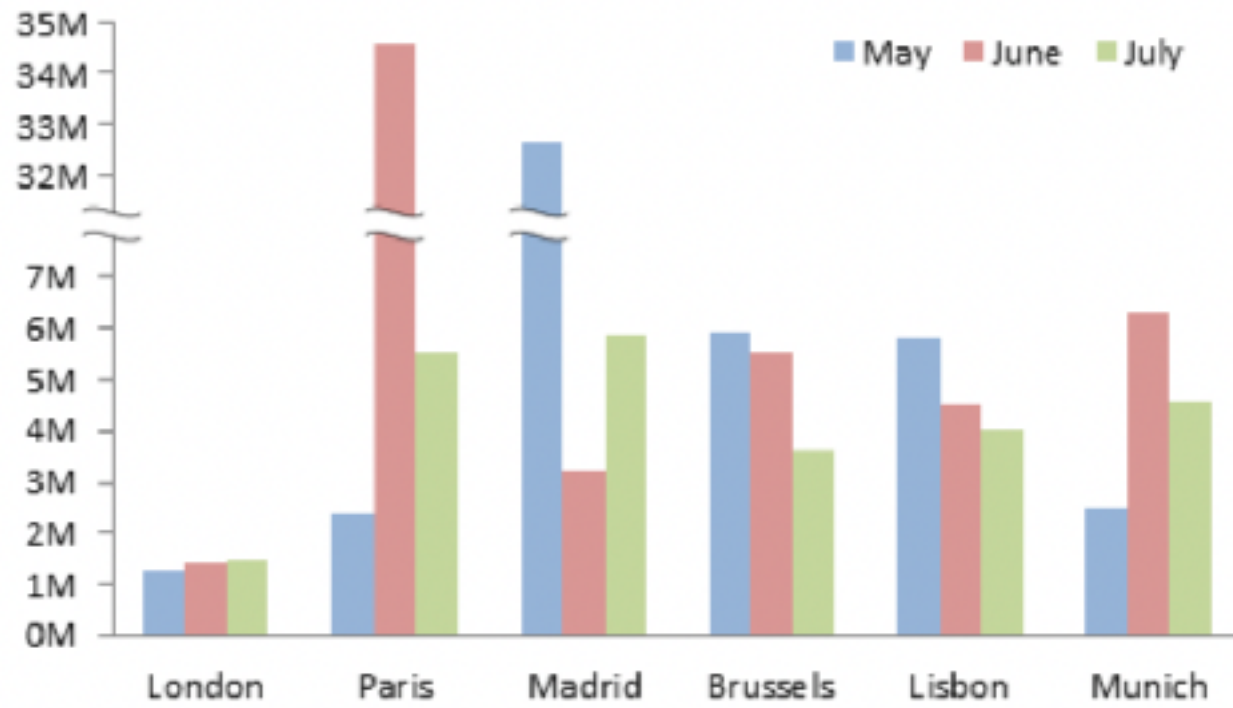
Some plotting software

- GNUPLOT
- MATLAB
- MATHEMATICA
- XMGRCACE
- ORIGIN
- PYTHON (MATPLOTLIB PYPLOT)

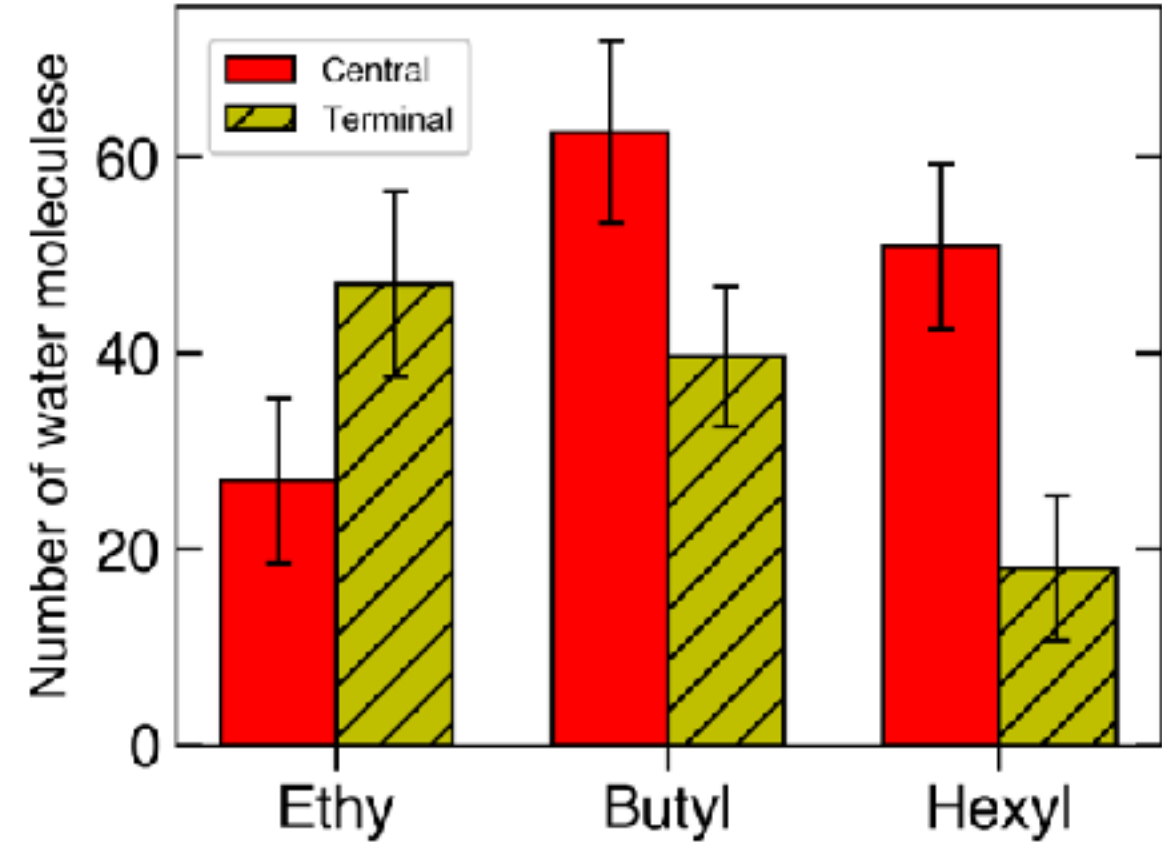


Some more about bar plot

Broken axis



Error bars



Arithmetical mean

$$y=ax$$

$$y=a+x$$

$$y=a+cx$$



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Next Class

4 PM Tuesday, 22 August 2023

Measurements of central tendencies