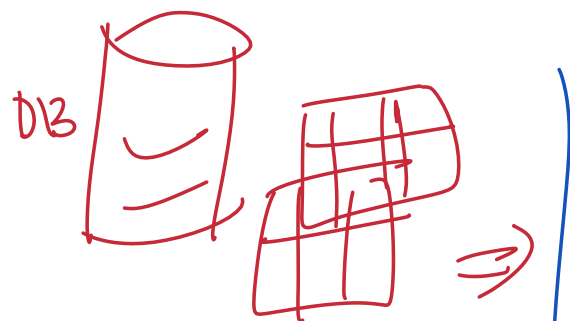


# Data Analysis with python?

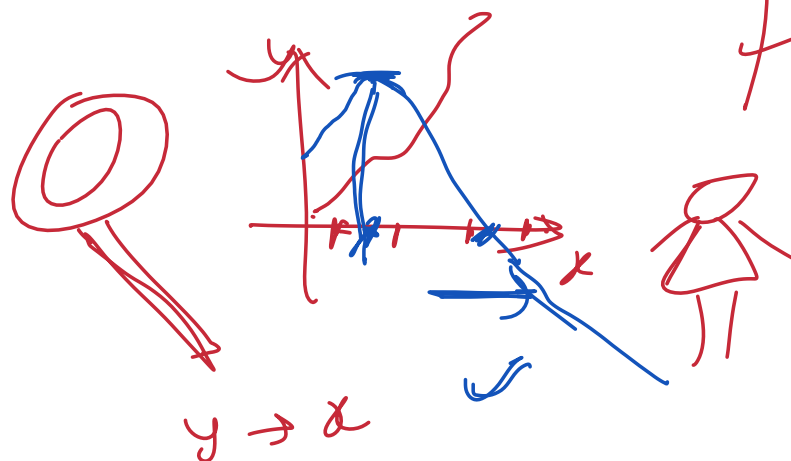
Basic python  
SQL  
SVC



• CSV

DB, files, Databases..

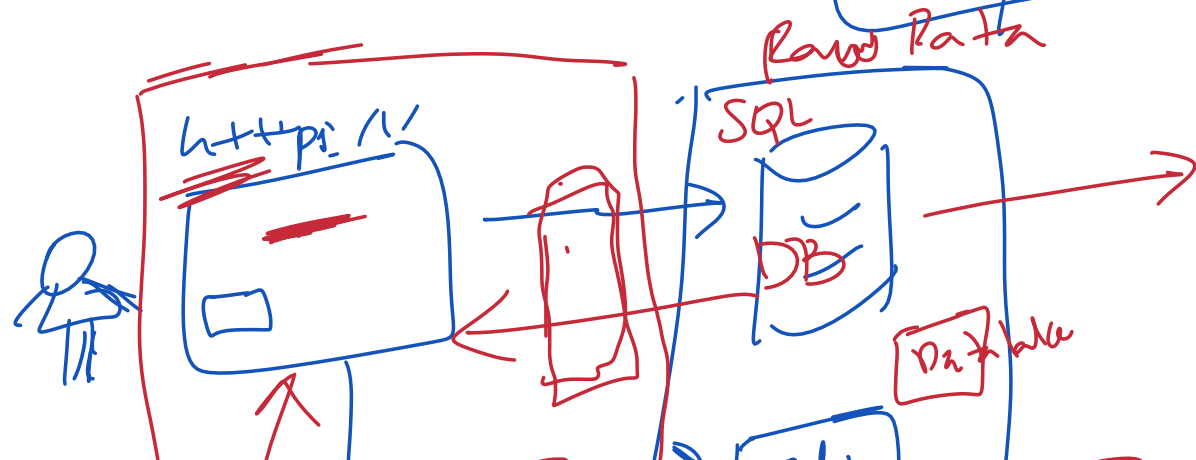
Raw  
Data



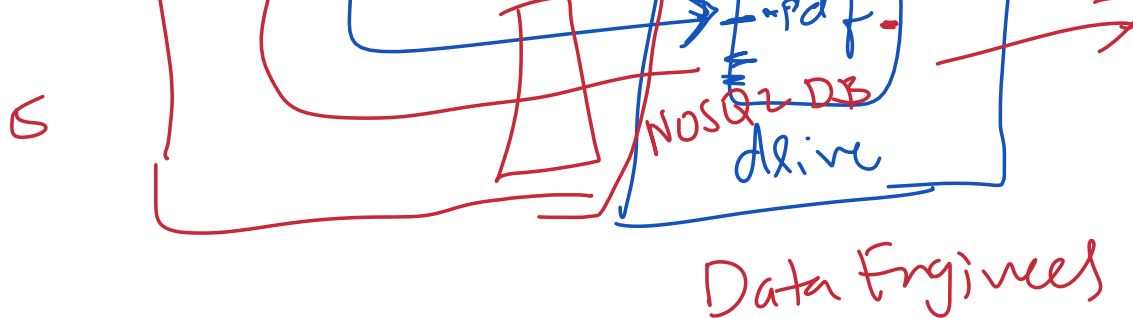
N	E	D
X	1	---

mydata.csv

N, E, D
X, 1, -
Y, 2, -



Raw  
Data



Messy

✓ NULL values

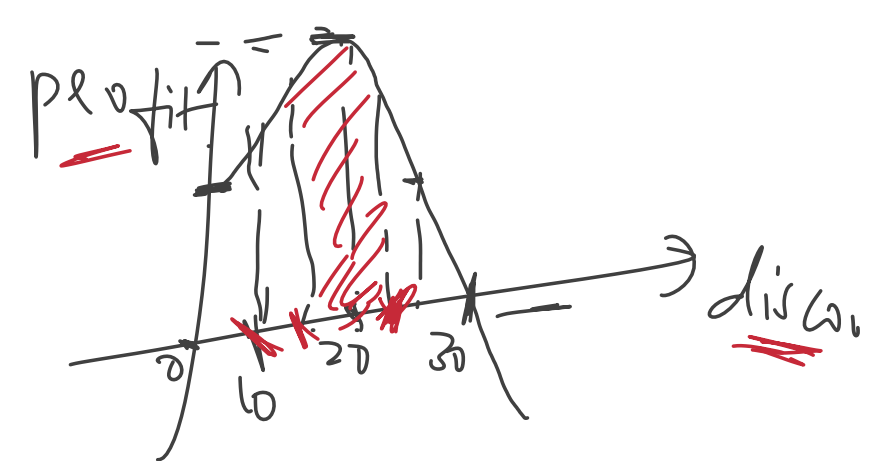
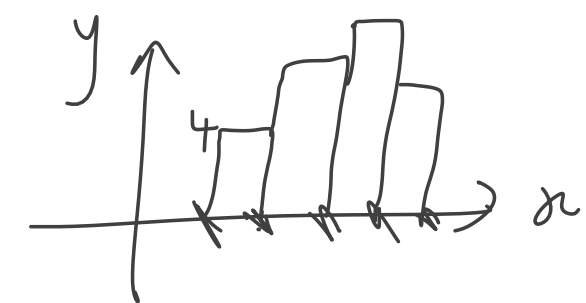
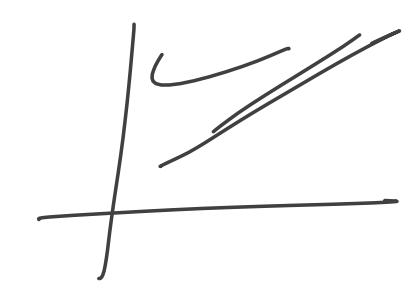
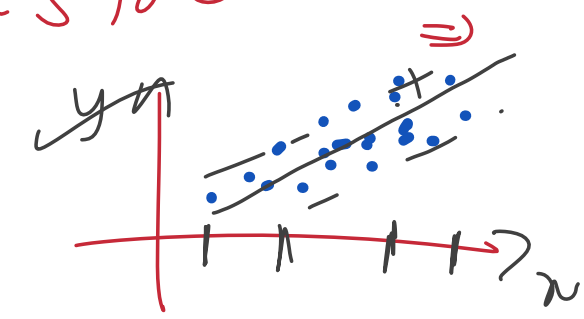
Data Engineers

⇒ Duplicates

Data Store

output input  
 $y \rightarrow x$  ??

inputs  
 $y \rightarrow x_1, x_2, \dots$  ??



Business

Business Requirement

Data Source  $\Rightarrow$  Data Collection  $\Rightarrow$  Data Cleaning

[Raw Data]

Data Cleaning  $\Rightarrow$  Data Visualization

Data Visualization  $\rightarrow$

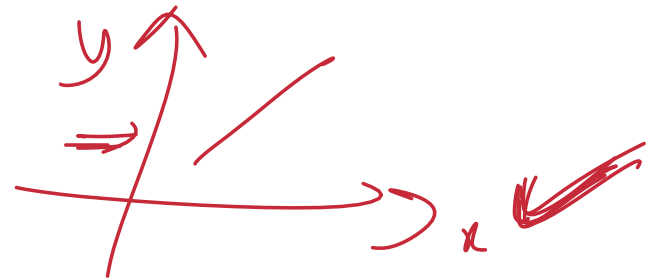
\*\*  $\Rightarrow$  (python)

$\Rightarrow$  tableau

$\Rightarrow$  power BI

$\Rightarrow$  null values

$\Rightarrow$  Duplicates



x	y

1000

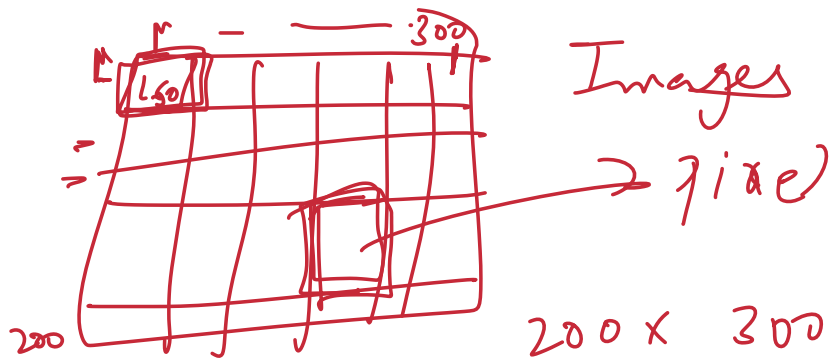
Package



$\rightarrow$  PyPI

Visualization  $\rightarrow$  matplotlib, seaborn  $\rightarrow$  Anaconda  
notebook

Data Analysis  $\rightarrow$  Pandas [numpy]



0 - 255  $\rightarrow$  B/W

R - 0 - 255 - 255

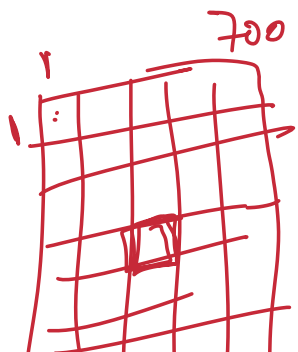
G - 0 - 255 - 0

B - 0 - 255 - 0

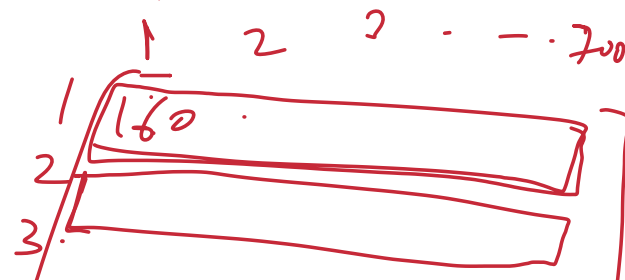
255	0
255	0
255	0

array =  $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \Rightarrow \begin{matrix} \rightarrow 1 & 2 \\ \rightarrow 4 & 5 \end{matrix}$

2 x 2

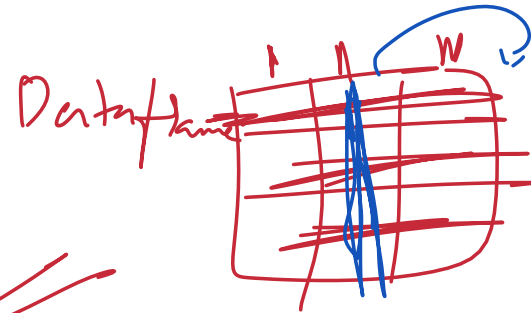


$\rightarrow$  B/W



400 [ ] [ ] [ ] [ ]  
400 x 200 array  
[1, 2, 3, 4, ...]

a = 1  
b = 2  
c = 3



Basic Python →

Python packages  
→ Data Analysis

Numpy \*  
Pandas \*\*\*

✓ Matplotlib  
✓ seaborn

documents/01-dv/DA +  numpy ==

doann /le/\_ → numpy = 2

Requirements.txt



40

