

# Physics

# Vector Analysis

# Complex analysis

# Chemistry

→ Data → Information → Knowledge  
 ↳ Axiomatic ↳ Truth

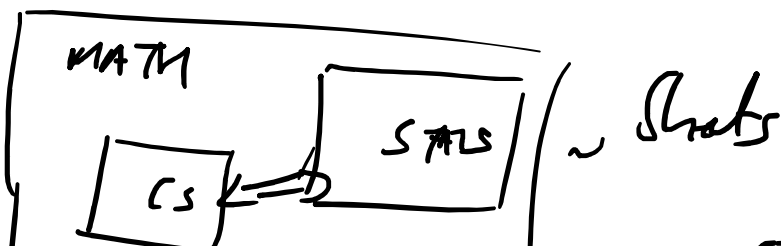
→ Stored patterns ~ Information

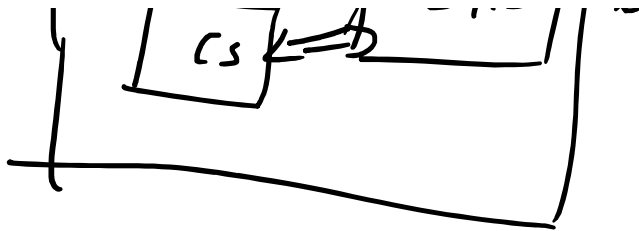
START

PRO.3

# Influencing

# Prognostication



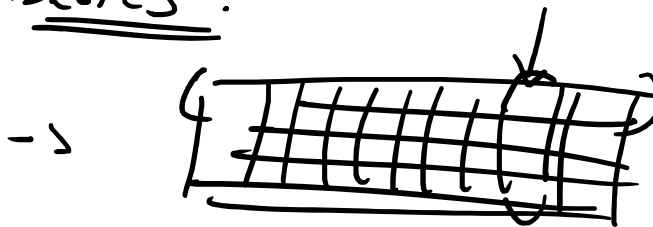


STATISTICS  
 → Descriptive  
 → Inferential

||

DATA SCIENCE

→ Basics :



CS CS DATA  
 (Row, Tuple, Sentence)  
 (Column, Attribute, Feature)  
 STATS

→ Feature ~ CS

Parameter ~ RS

→ Numerical Data : Numbers (Nominal, Ordinal)

→ Non-Numerical : Categorical (Boolean)

$[X] \sim 1-D \sim \text{Scalar}$

$[XXXX] \sim 1-D \sim \text{Vector}$

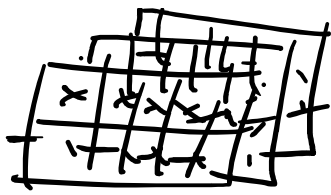
x	x	x	y
x	x	x	y

 $\sim 2-D \sim \text{Matrix}$

x	x	x	x	x
x	x	x	x	x

 $\sim 2-D \sim \text{Tensor}$





$\sim N-D \sim \text{Tensor}$

$\sim$

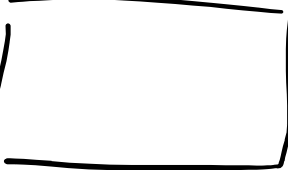
$\sim$

$B_k$

$\{$

784

2-D



MNIST

28



28

$\sim$