Recap……

- Describing Two Quantities in Azureml
- Scatter plot - correlation

Guess your Topic…

INTRODUCTION….

Probability

Chance, or likelihood, of something happening.

- If I toss a coin, what's the probability it will turn up Heads?
- What are the chances it will rain tomorrow?
- If I launch a new product, what are the chances it will be a success?

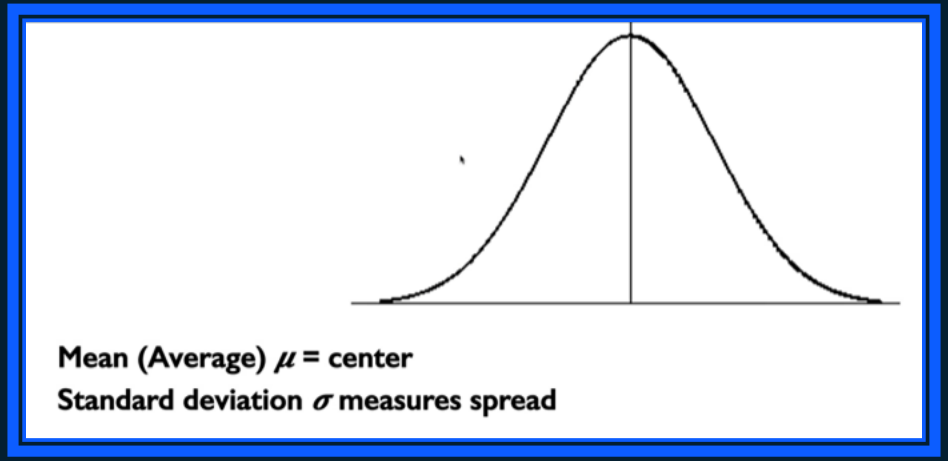
PROBABILITY

Chance, or likelihood, of something happening.

Number between 0 and 1.
Probability 0 → Impossible.
Probability 1 → Certainty.

Probability calculations depend on information availability.

NORMAL DISTRIBUTION



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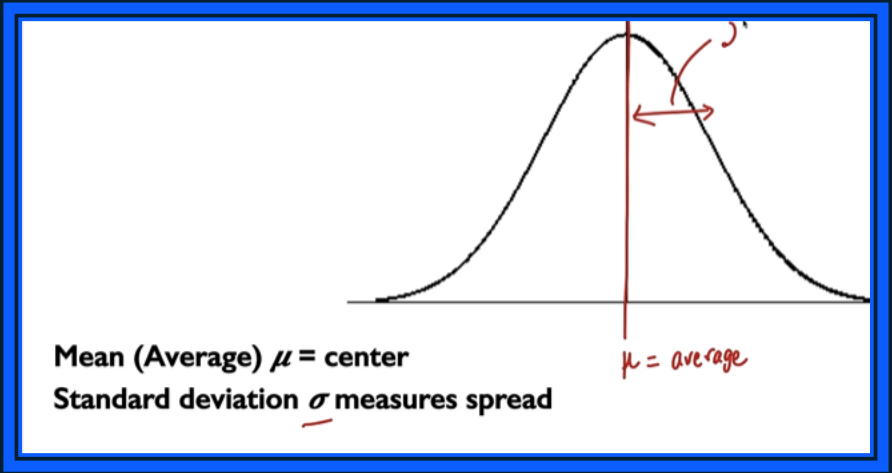

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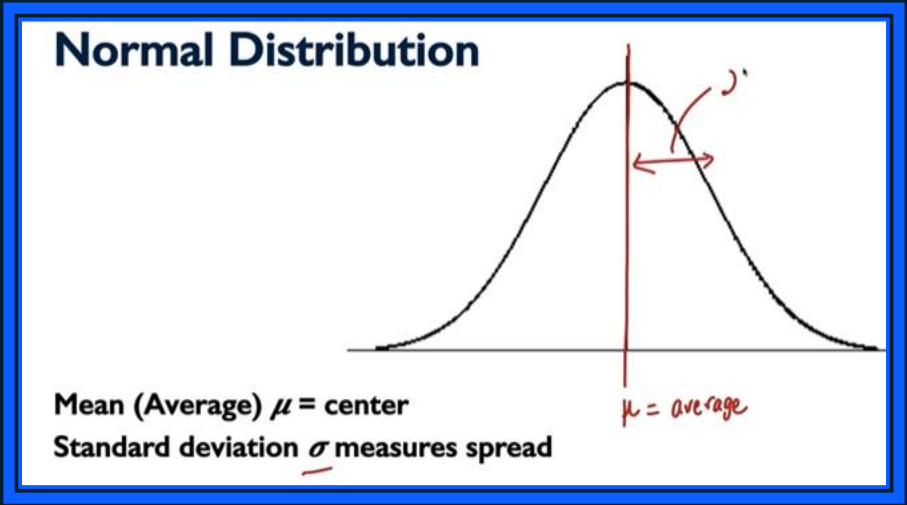


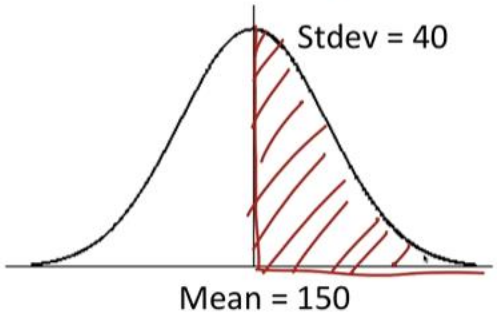
NORMAL DISTRIBUTION

Normal Distribution Probability

Probability = area under the curve for the corresponding interval.

Total area under curve = 1

Probability of more than 150?



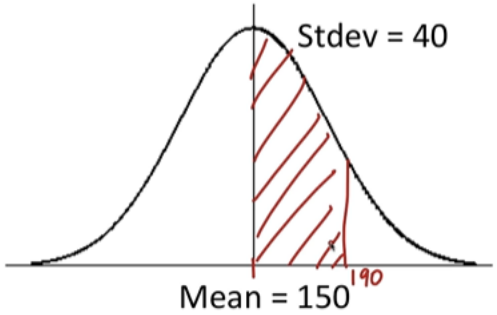
NORMAL DISTRIBUTION

Normal Distribution Probability

Curve = Probability Density Function.

Probability of between 150 and 190?

Probability of exactly 120?



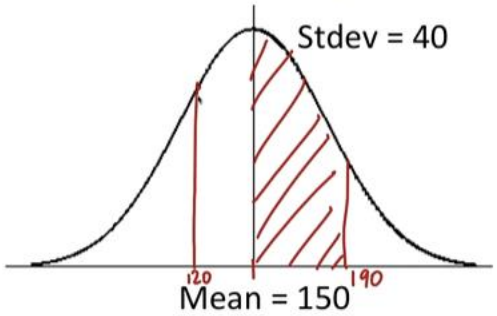
NORMAL DISTRIBUTION

Normal Distribution Probability

Curve = Probability Density Function.

Probability of between 150 and 190? 34%

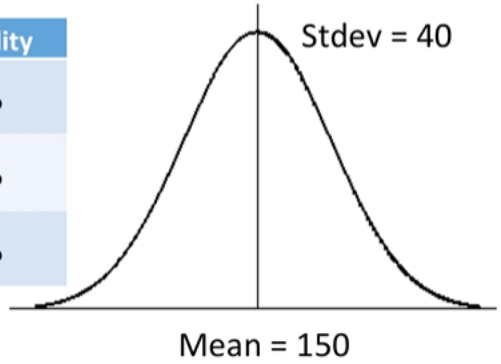
Probability of exactly 120?



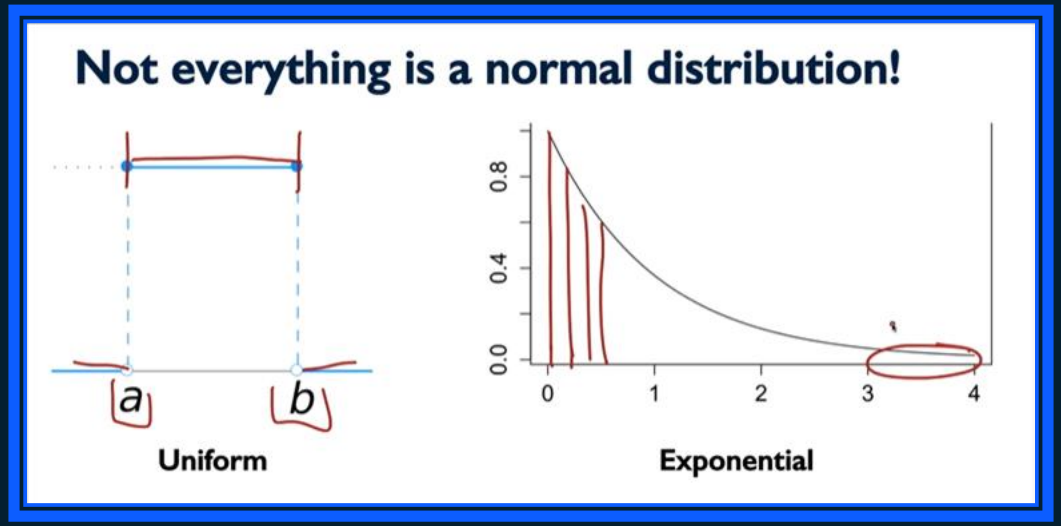
NORMAL DISTRIBUTION

Normal Distribution Probability

Range	Probability
Within 1 stdev of mean 150±40	68.2%
Within 2 stdev of mean 150±80	95.5%
Within 3 stdev of mean 150±120	99.7%



NORMAL DISTRIBUTION



Time for Assessment…..

- All the data fall under normal distribution (True/False)
- In 2 standard deviation= 99.7 % data will fall within the distribution (True/False)

SUMMARY……

- Introduction to Probability
- Normal Distribution Probability
- Examples

Reference.....

https://www.khanacademy.org/math/probability/probability-geometry/probability-basics/a/probability-the-basics?utm_account=Grant&utm_campaignname=Grant_Math_Dynamic&gclid=Cj0KCQjwoJX8BRCZARIsAEWBFMJX2uNIupQ4-Ek4clp9mg8WcWC_97ylU7OJvoiP3mrm_hwdbBhY8nkaAs_9EALw_wcB

THANKS!

Any questions?.....