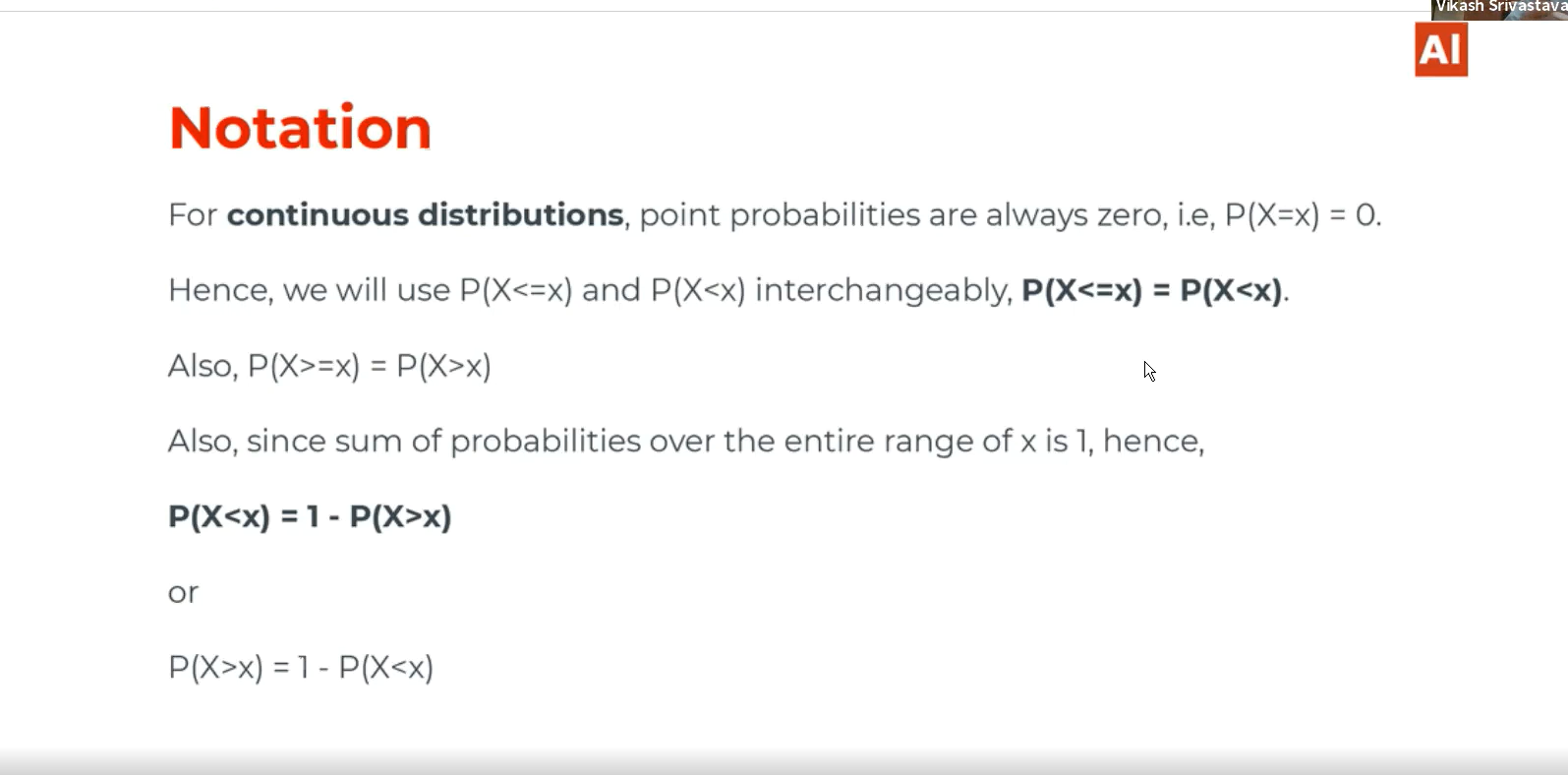
Probability distribution for continuous Random variable:

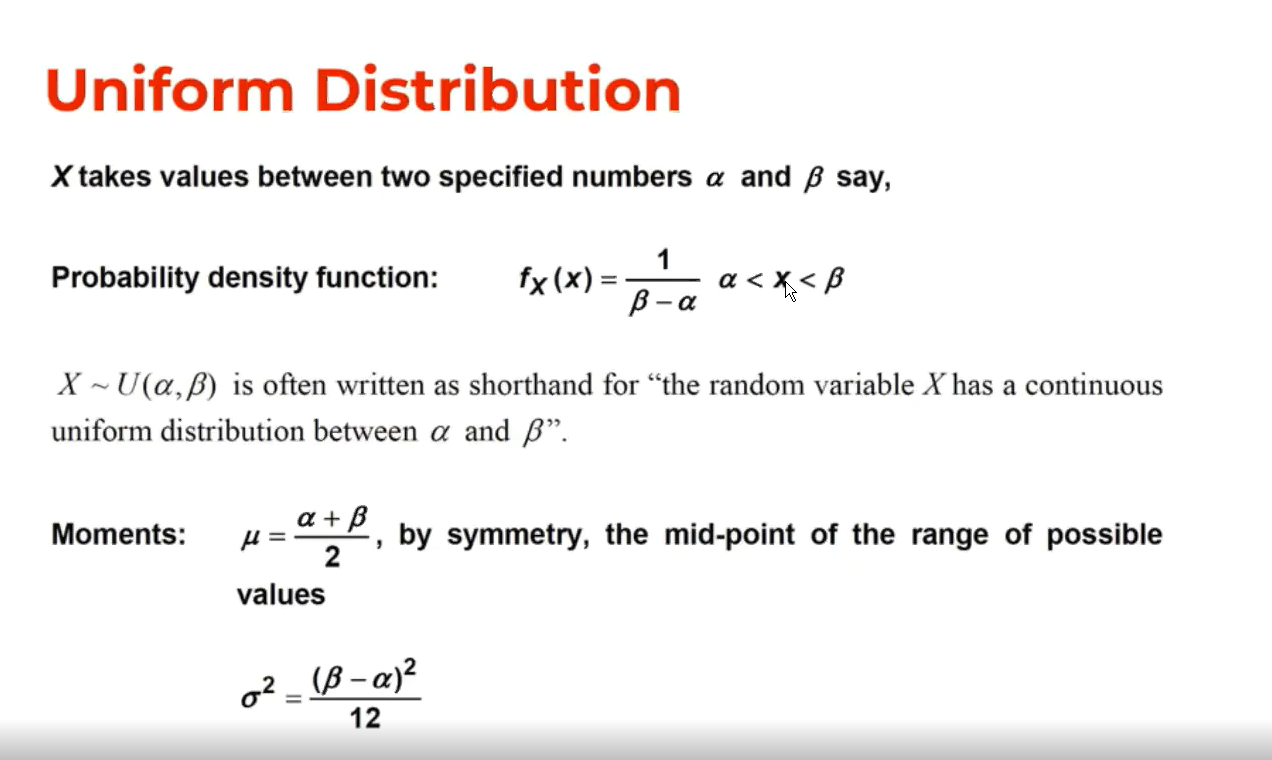
Here the random variable can take values in between a and b.

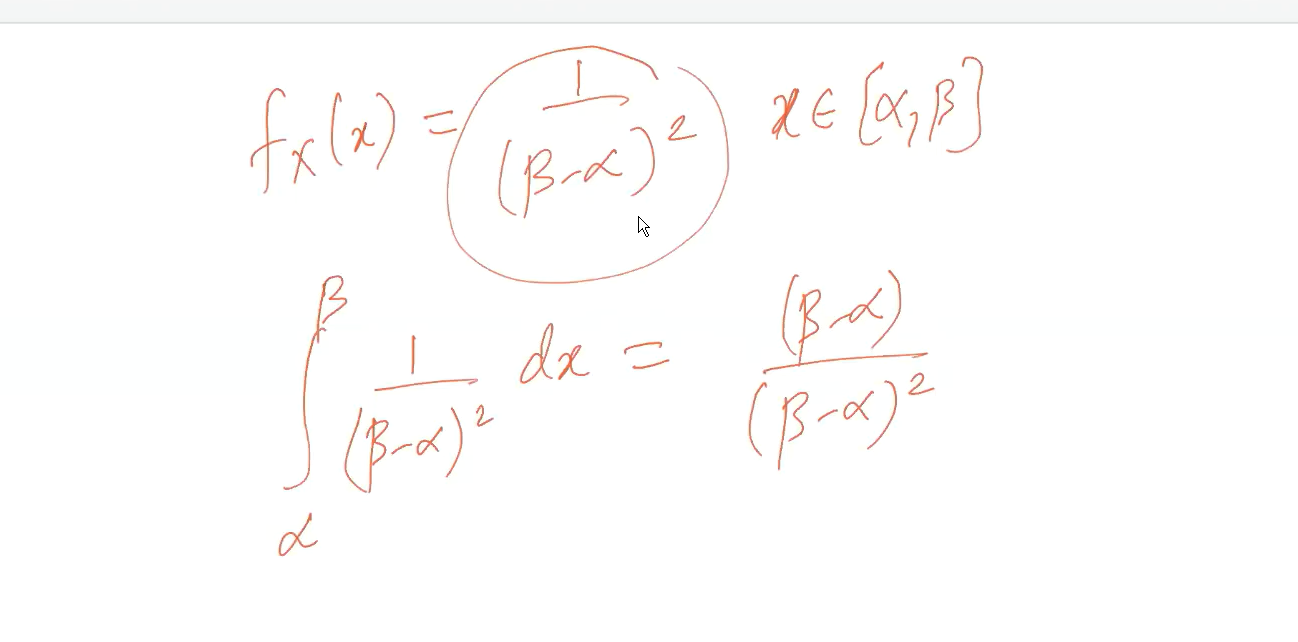


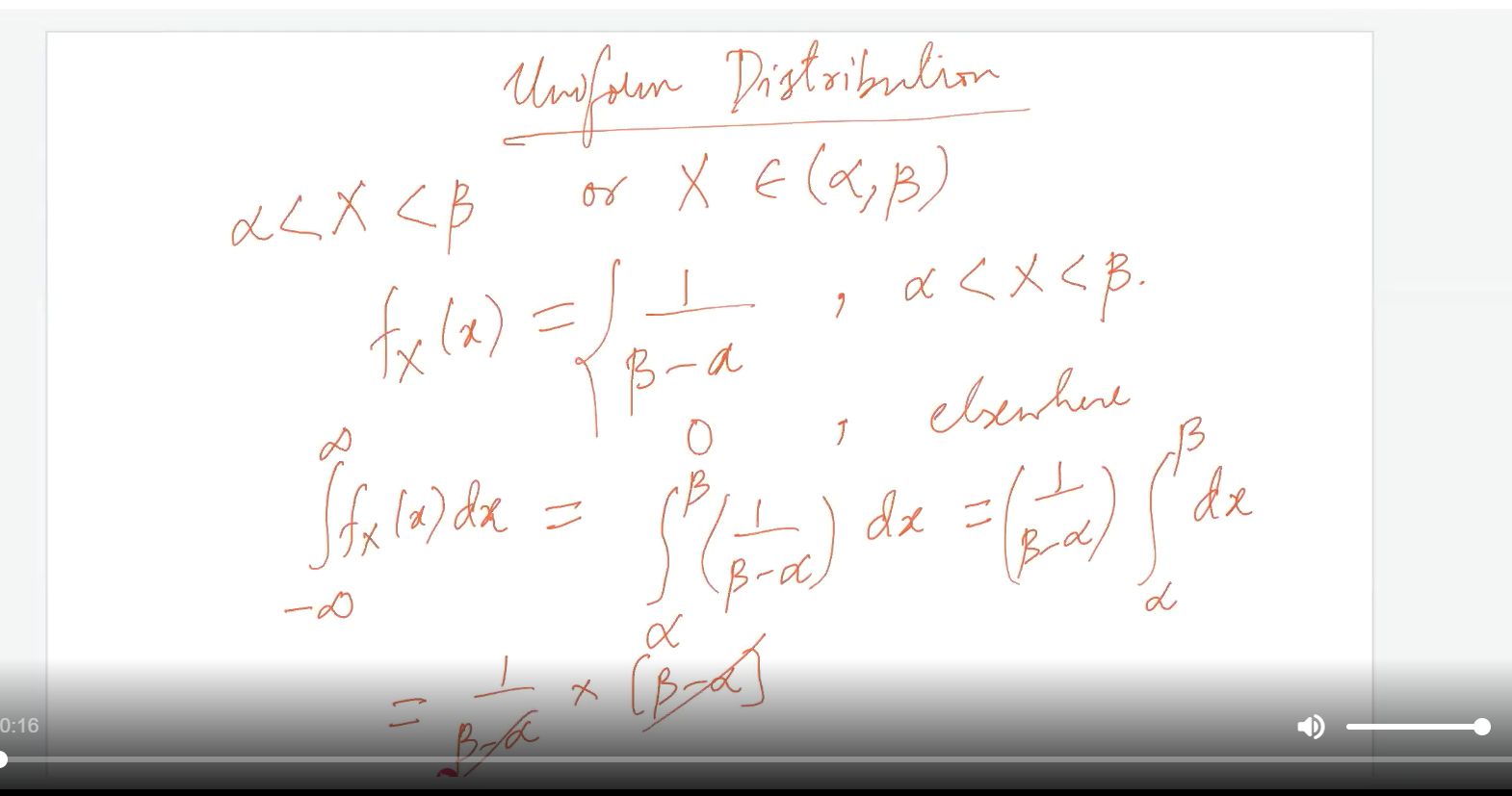
# The example of uniform distribution by taking one example:

In numpy we had seen a method np.random.random() 🡪 it uses continuous uniform distributions and it will take values from 0 to 1 which is considered as a to b.

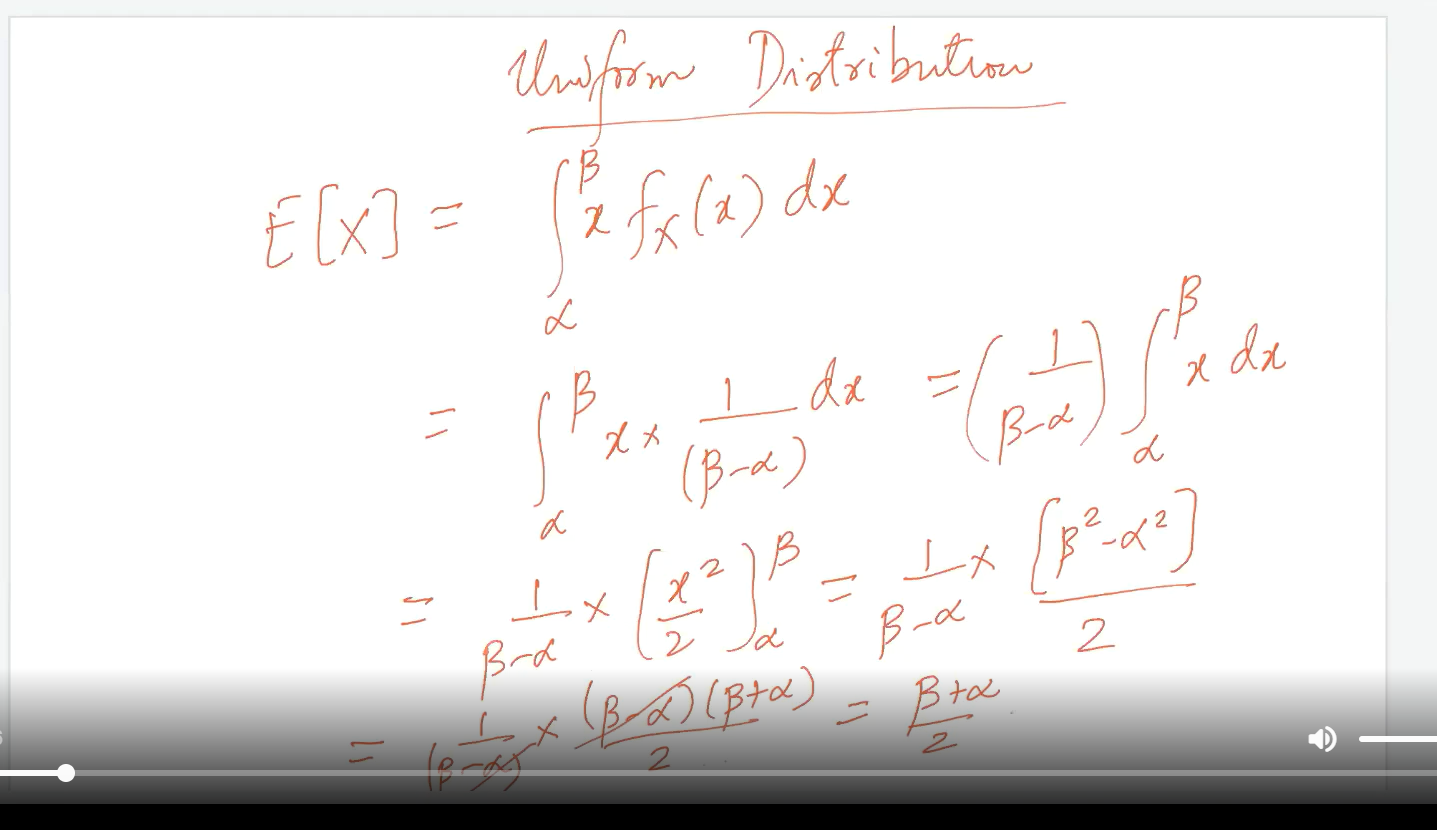
Np.random().rand 🡪 Uses Discrete uniform distribution function.



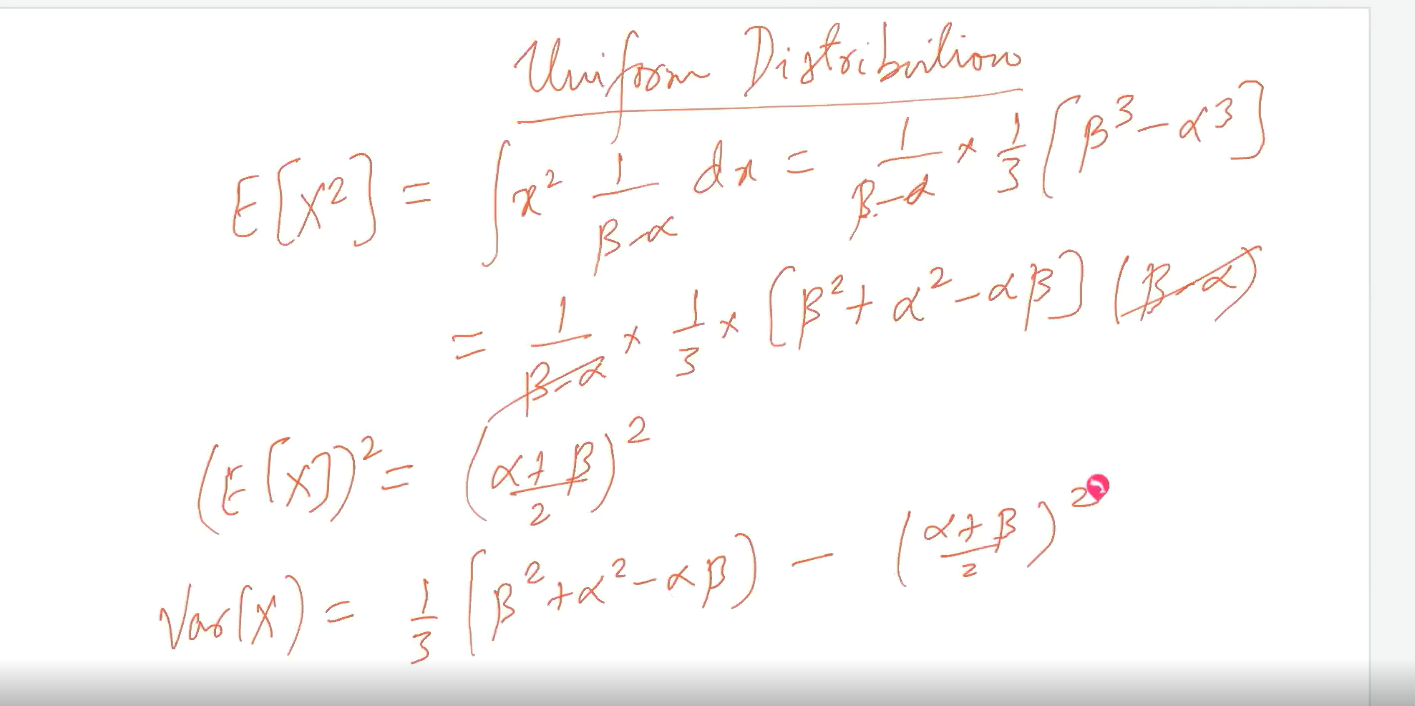




# Expected value for uniform distribution:

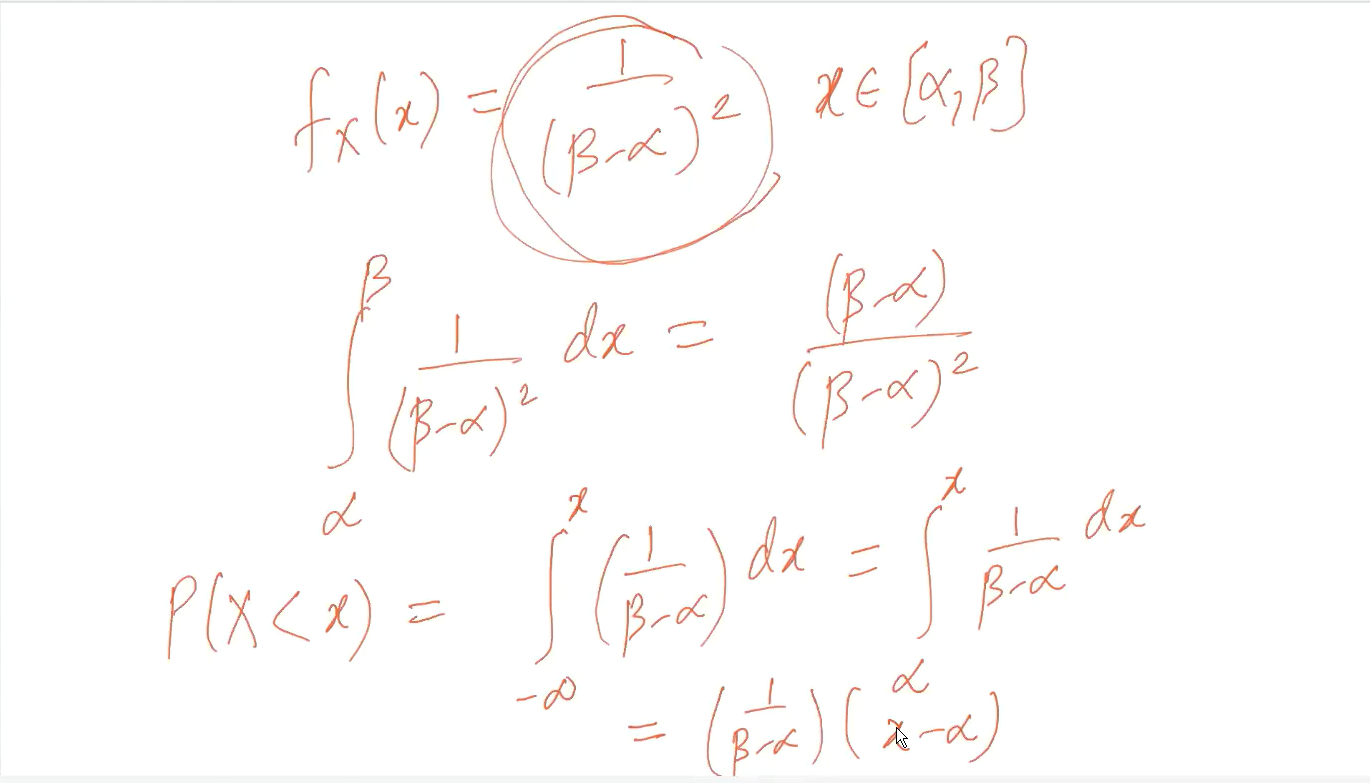


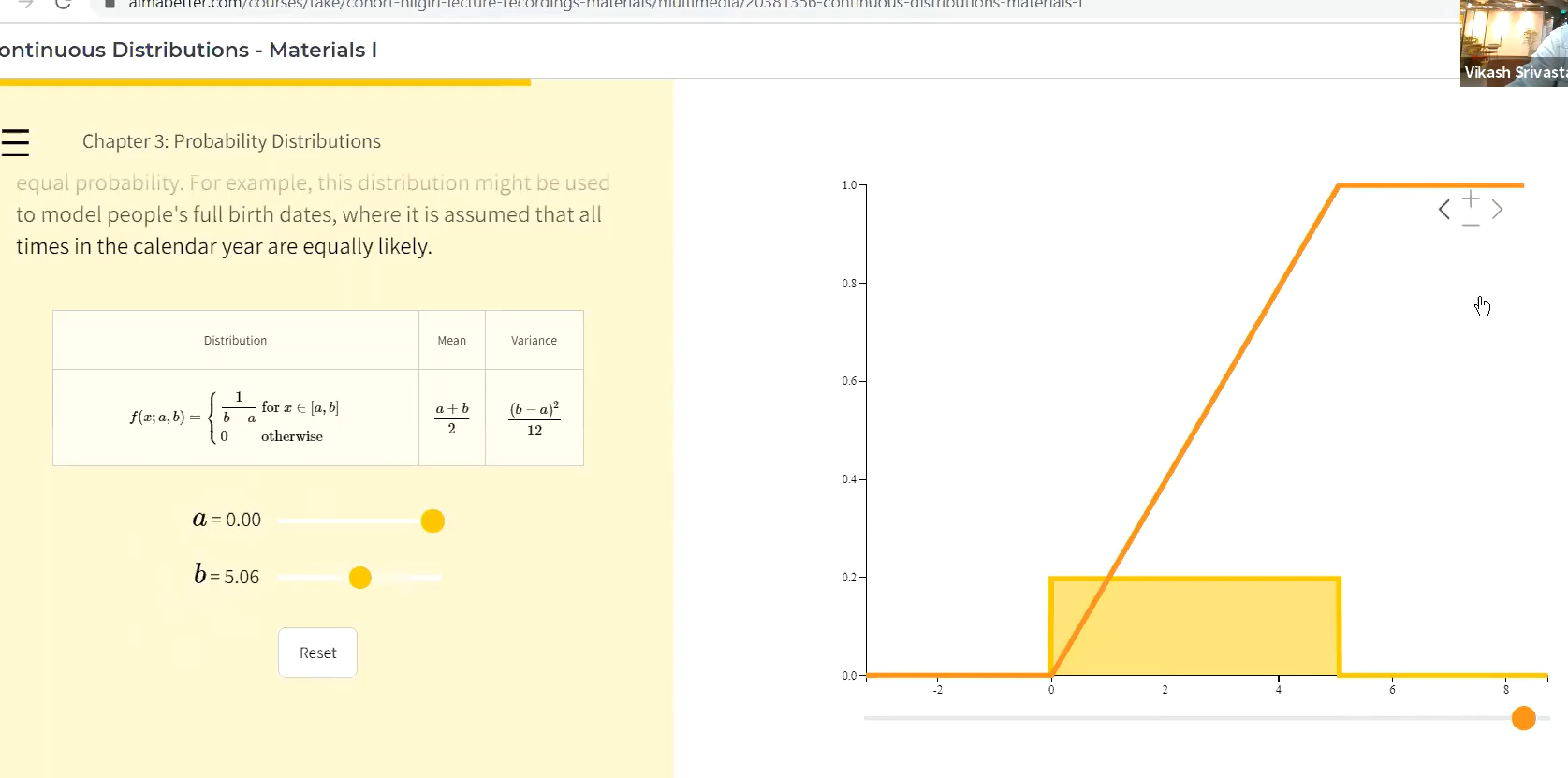
# Mean and variance for uniformly distributed random variable:



# CDF of uniformly distributed random variable:

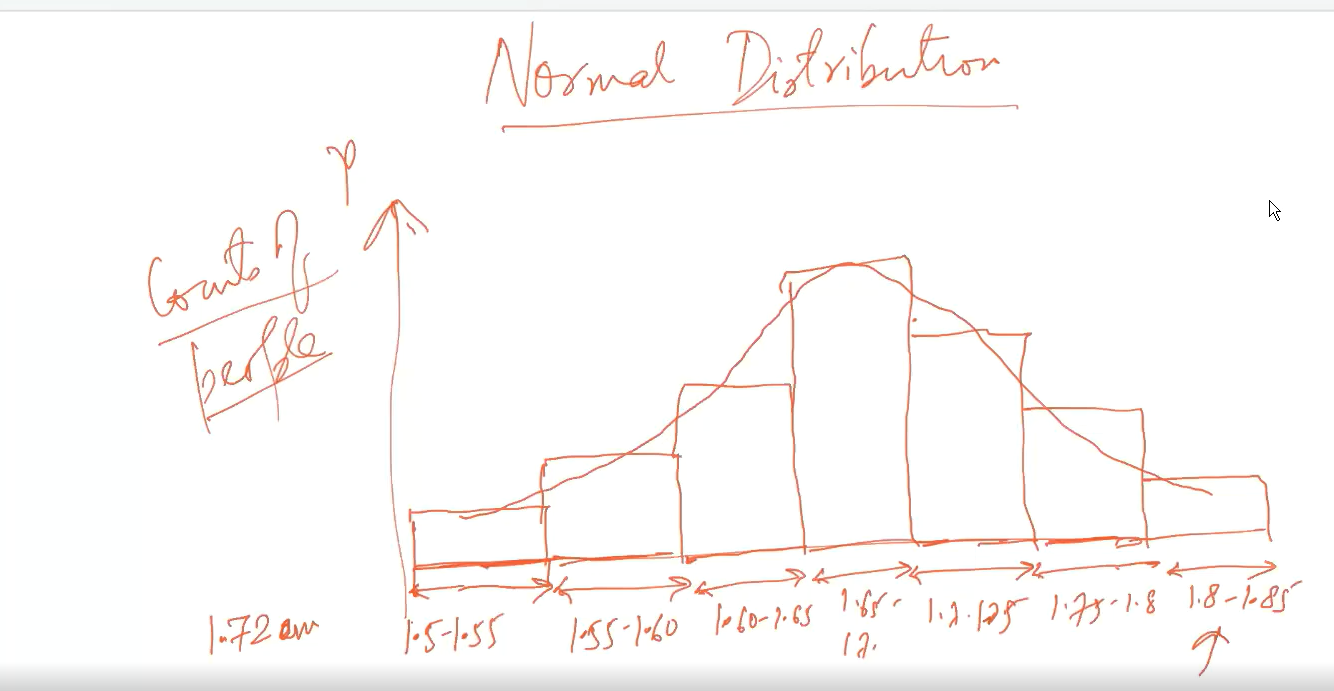
At Alpha cdf==0 at beta cdf==1 and in between alpha and beta the cdf get vary.

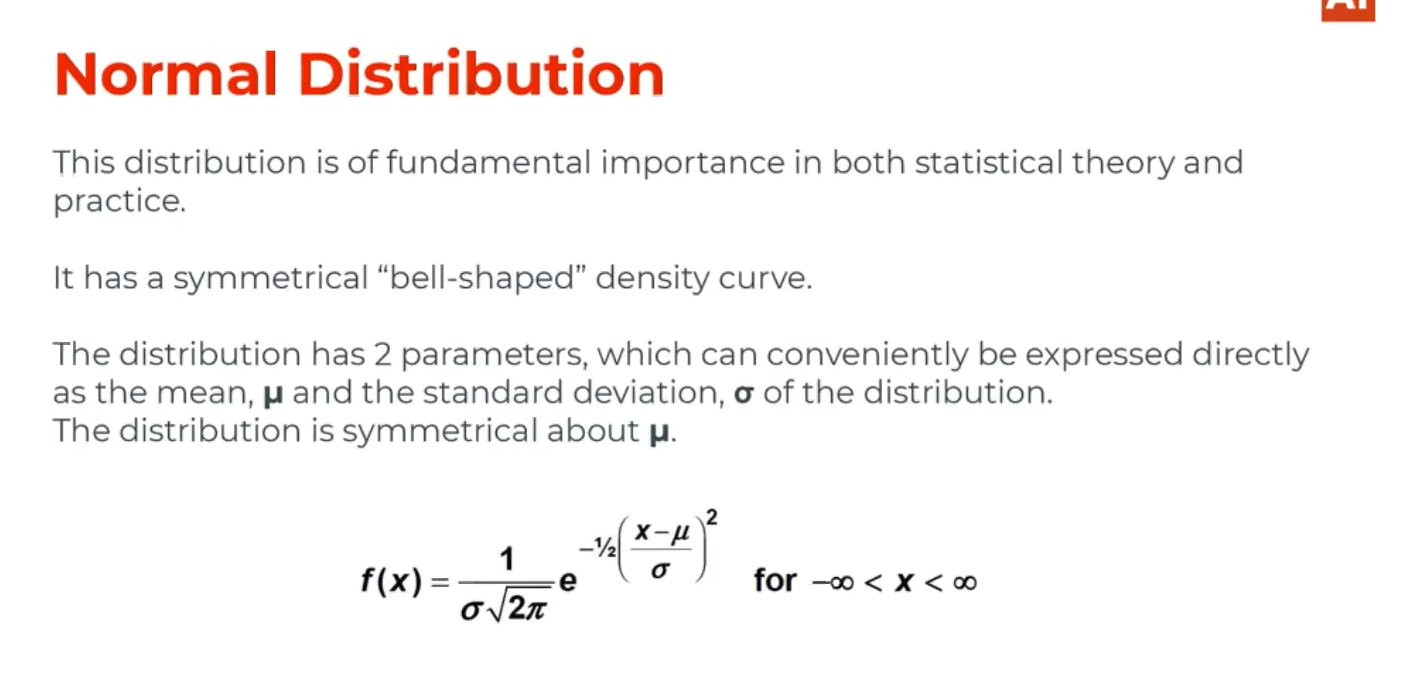


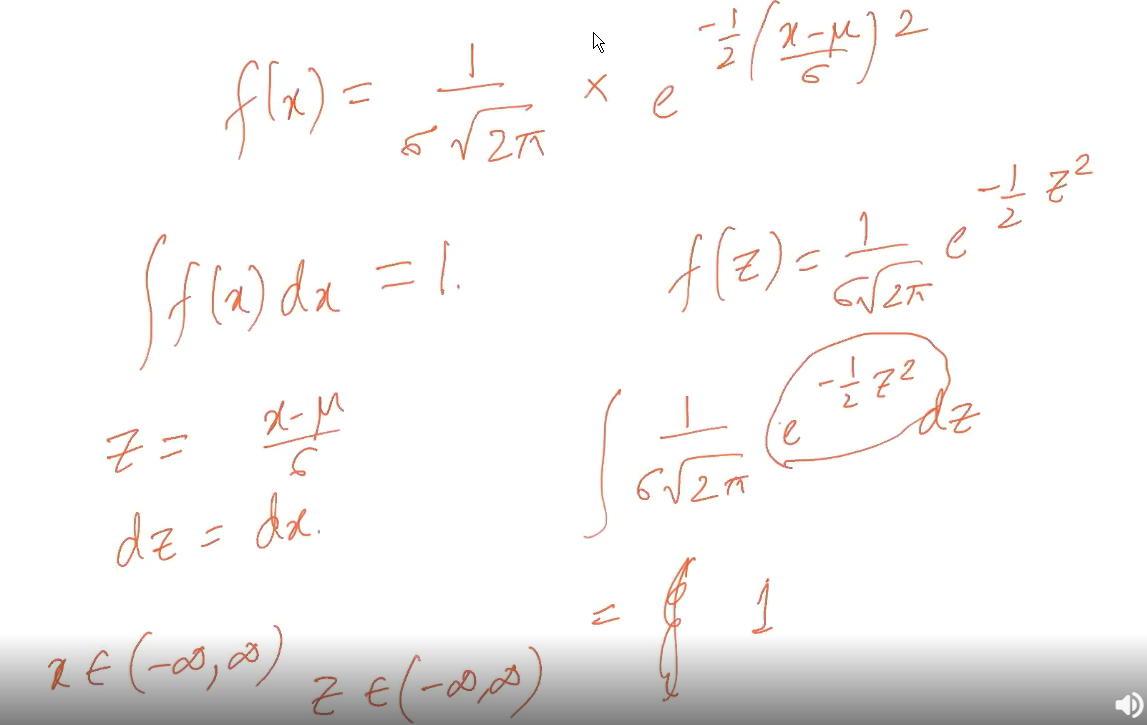


# Normal distributions:

Height v/s count of people.







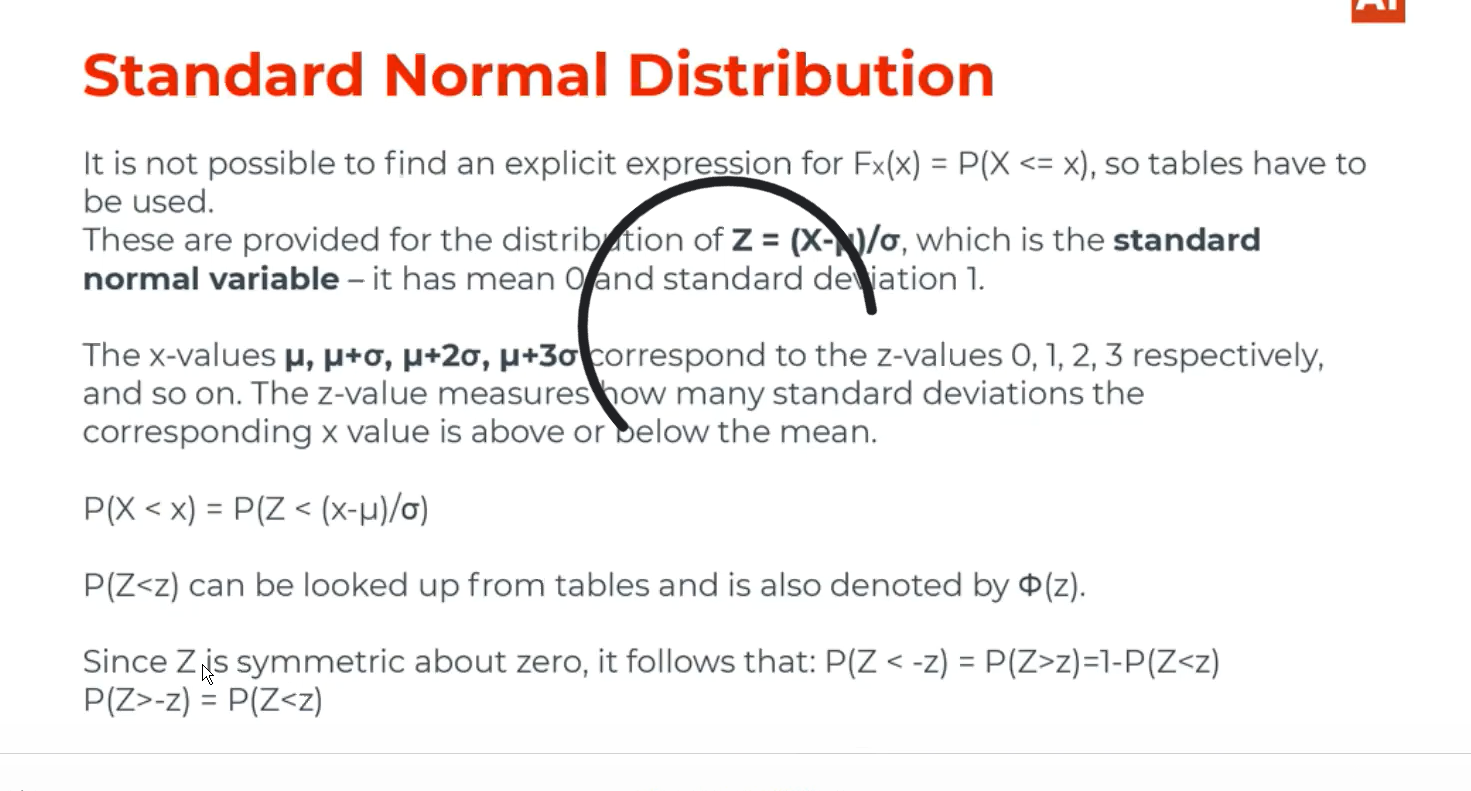
Properties of Normal distribution:

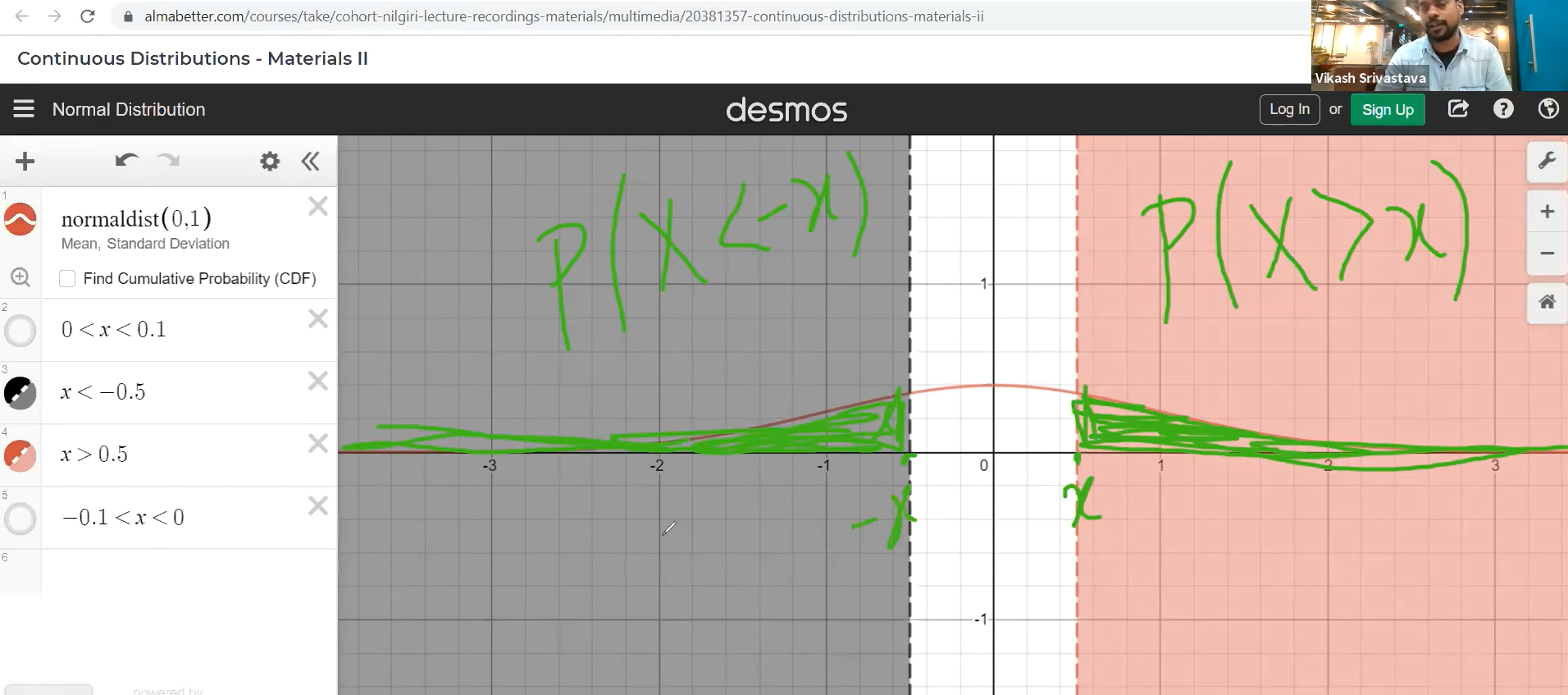
🡪Symmetrical about the mean

🡪Asyymptotatic 🡪Tails of the curve Never touches to x-axis

🡪Bell shaped curve

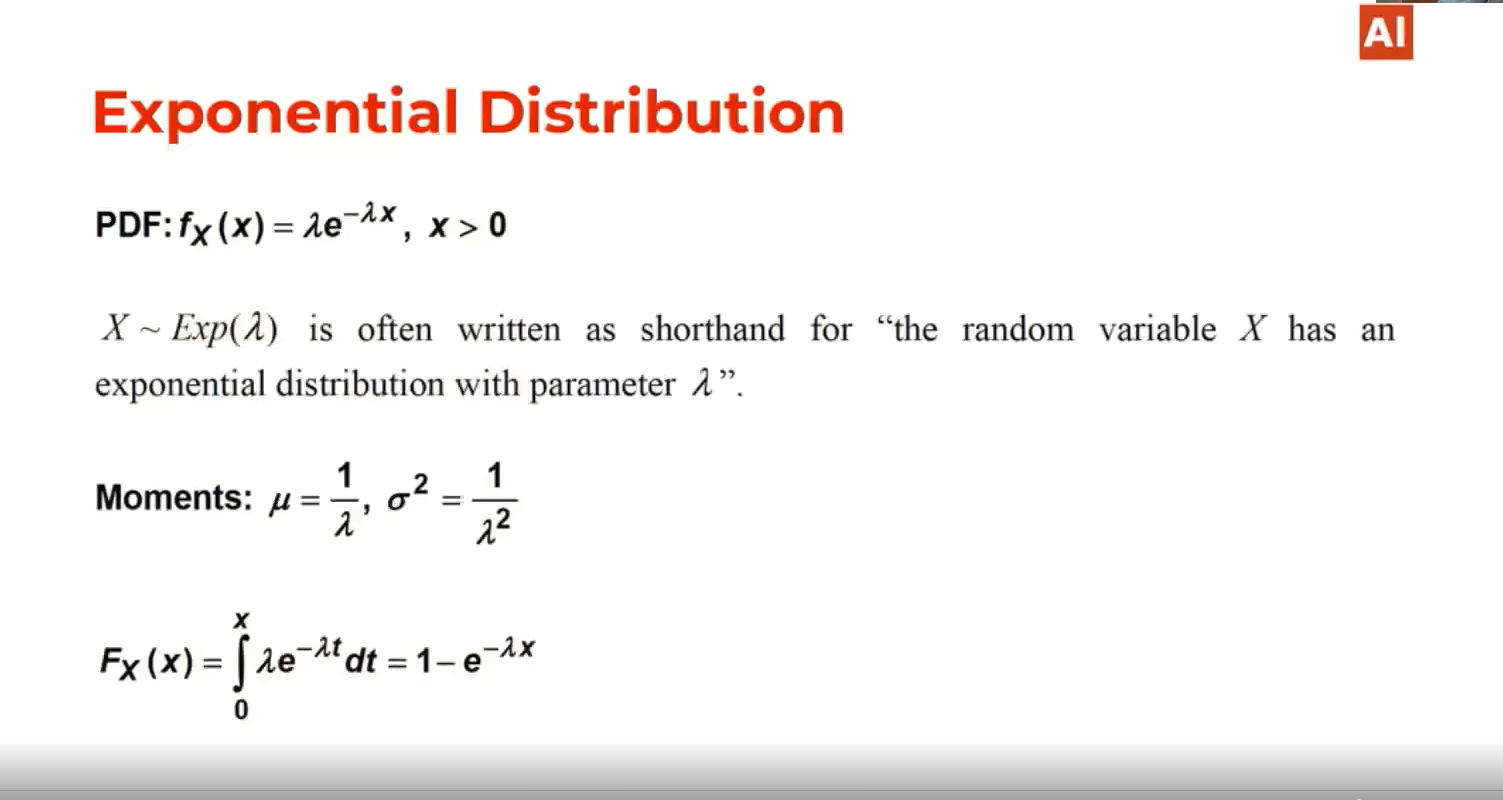
# Standard Normal distribution:

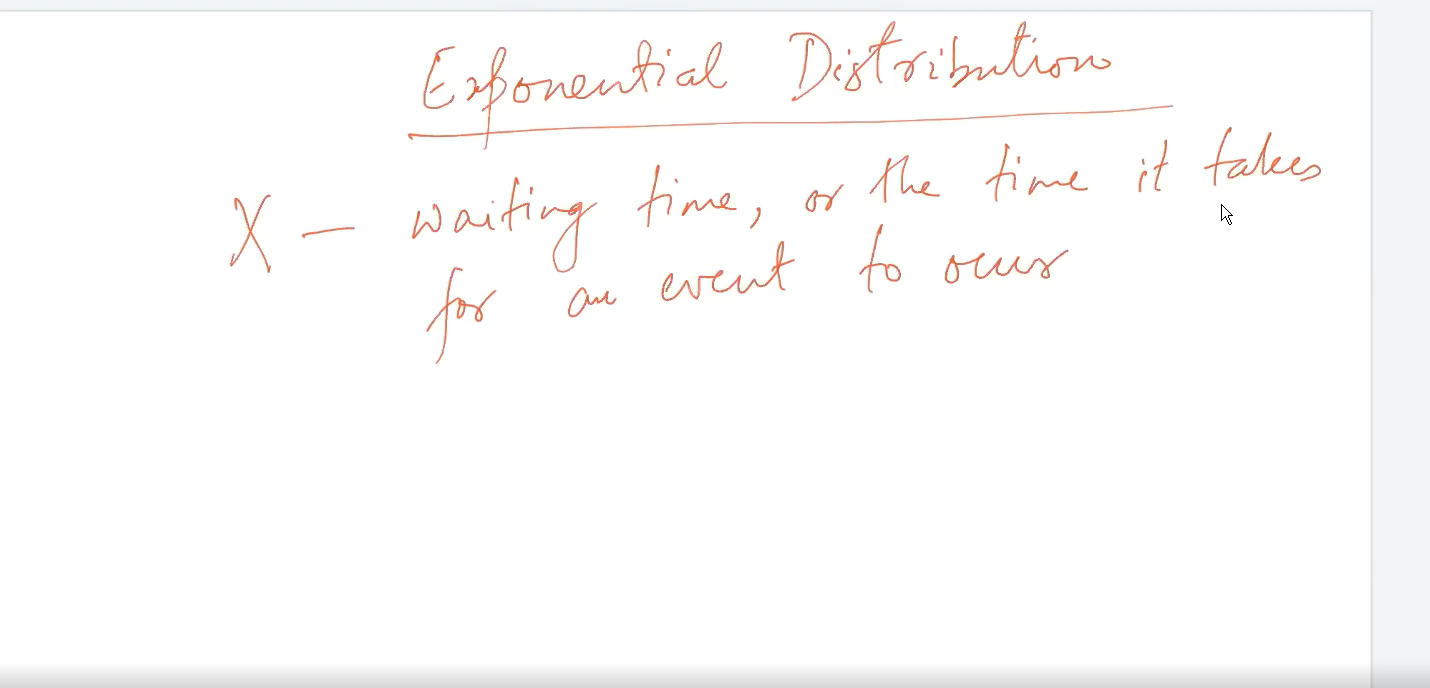


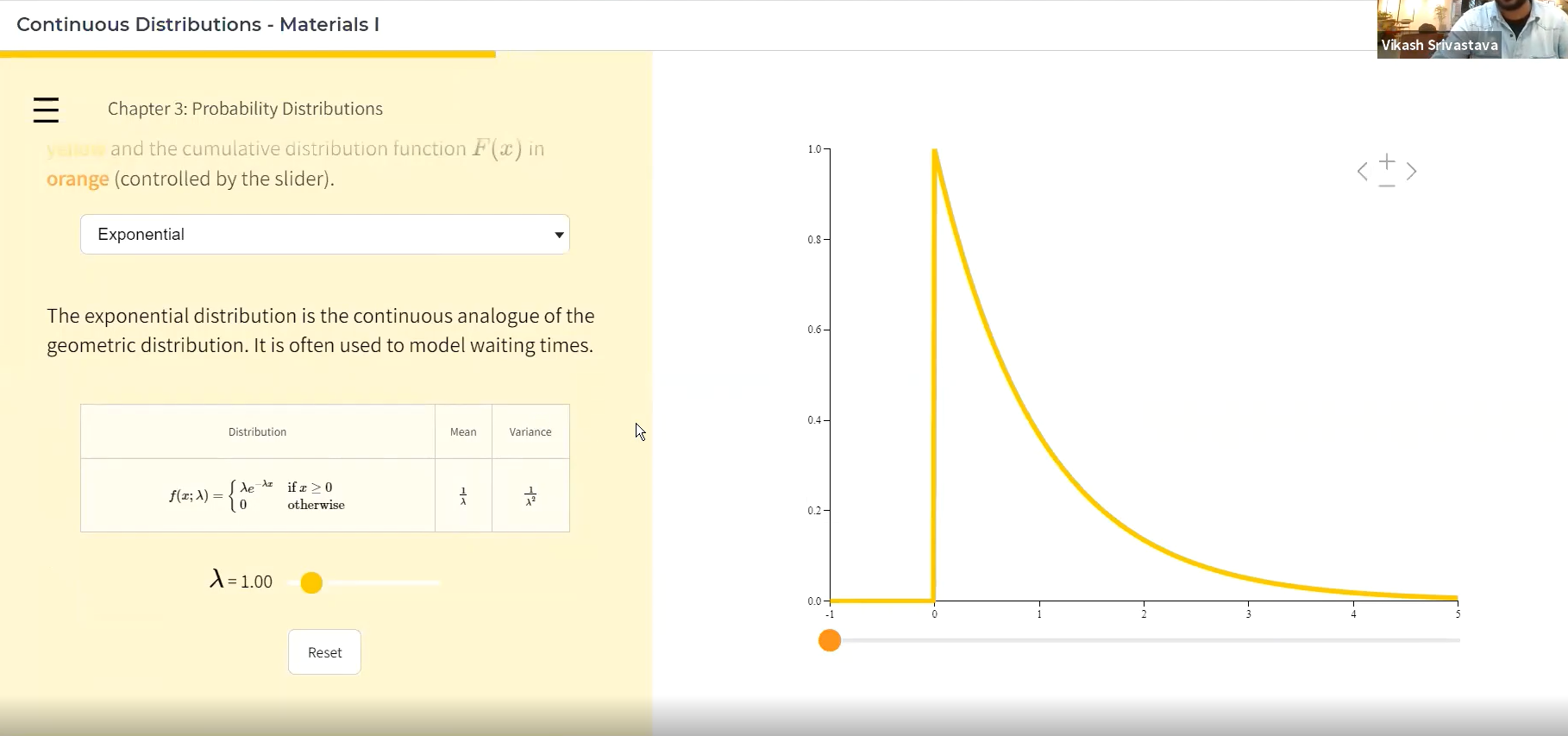


# Exponential distribution:

Its used to model the waiting period. It’s a continuous analogue of geometric distributions.







# Exponential and Poisson distribution relation:

