



M5-03: Using scipy.stats for Distributions

Part of the "Polling, Confidence Intervals, and the Normal Distribution" Learning Badge

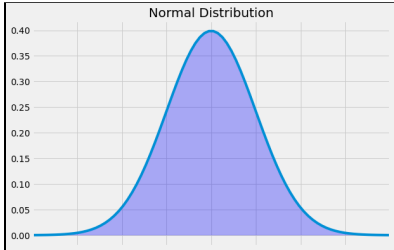
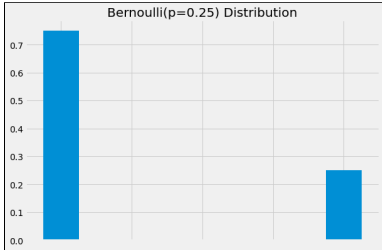
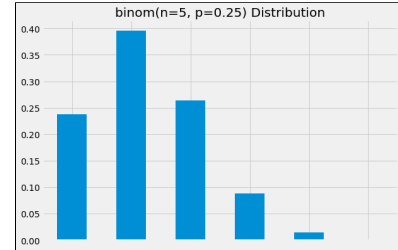
Video Walkthrough: <https://discovery.cs.illinois.edu/m5-03/>

Summary of Functions on Distributions

Given any distribution that we have initialized into the variable D, we can use any of the following functions provided by scipy.stats:

Property	Python
Find the Expected Value (EV) of the distribution.	<code>D.mean()</code>
The 50%-tile result of a distribution.	<code>D.median()</code> <code>D.ppf(0.5)</code>
Standard Deviation of the distribution.	<code>D.std()</code>

Some of these values aren't always what you expect:

Distributions, Code, and Results:		
D = norm()	D = bernoulli(p=0.25)	D = binom(p=0.25, n=5)
		
norm()	bernoulli(p=0.25)	binom(p=0.25, n=5)
Python Code: D.mean() Result:	Python Code: D.mean() Result:	Python Code: D.mean() Result:
Python Code: D.median() Result:	Python Code: D.median() Result:	Python Code: D.median() Result:
Python Code: D.std() Result:	Python Code: D.std() Result:	Python Code: D.std() Result: