Probability and Statistics Documentation

# StatsLibrary

Holds all the formulas we learned throughout the midterm period.

## Methods:

### getMean(int[] userInputNumbers)

Calculates the mean of the array that’s provided by the user. The mean is the average of the array.

### getMedian(int[] userInputNumbers)

Calculates the median of the array that's provided by the user. The median is the middle value of an array.

### getMode(int[] userInputNumbers)

Calculates the mode of the array that’s provided by the user. The mode is the number most frequent in the array.

### getStandardDeviation(int[] userInputNumbers)

Calculates the standard deviation of the array that’s provided by the user.

### getVariance(int[] userInputNumbers)

Calculates the variance of the array that’s provided by the user.

### getFactorial(int n)

Calculates the factorial value of the array that’s provided by the user.

### getPermutation(int n, int m)

### getCombination(int n, int m)

### independentIntersection(List<Integer> I, List<Integer> J)

### dependentIntersection(List<Integer> I, List<Integer> J)

### exclusiveUnion(List<Integer> I, List<Integer> J)

### inclusiveUnion(List<Integer> I, List<Integer> J)

### findProbabilityA(int I, int SampleSize)

### findProbabilityB(int J, int SampleSize)

### findProbabilityAandB(int union, int SampleSize)

### findDependent(int J, int K, int SampleSize)

### findIndependent(int J, int K, int SampleSize)

### getBinomialDistribution(int J, double K, double L, int M)

### getGeometricDistribution(int k, double p)

### getHyperGeometricDistribution(int r, int y, int N, int n)