

Mango Python Coding Test

Data analysis

Read in the csv containing NBA free throws. Visualise some aspect of the data you find interesting, e.g., the average number of free throws per period for the regular season and the playoffs.

Programming

Functions

Write a function that will draw random numbers from a given distribution. The function should take one argument for the number of samples and a second argument which specifies the distribution (Normal, Poisson or Binomial). The function should be able to handle additional parameters depending on the distribution chosen, e.g., mean and sd for Normal samples.

Object-oriented programming

Construct an alternative to the above solution by using one or more classes instead of a single function.

Instances of this distribution class should store the distribution parameters as attributes, and also contain a draw method, which draws a fresh set of random numbers according to the distributions parameters, and a summarise method, which prints the min, max, mean, and standard deviation of the newly drawn sample.

Package Building

Build a package containing the functions and classes above. Use any tools as necessary. Include instructions on how the package can be installed.