Alec Burmania

1/27/2016

Applied Digital Signal Processing Lab Report 2

The focus of this lab is to create a simple program that can compute statistical measures from a random dataset. The program must be able to compute mean, median, standard deviation, and covariance. I generated two sets of numbers using the MATLAB mean function and put them into a C header file, along with the size of the dataset. To compute the mean, I take the random numbers from the first set, add them, and divide by the amount of numbers. I created a method to compute the mean for a set of numbers. For the median, I create a method for sorting the numbers so that the median is easier to compute. From there I compute the median based on the parity of the dataset. For the standard deviation and covariance metrics, I leverage the mean function when computing the numbers. I use loops to find the difference between each item and its corresponding mean. I return all of the statistics to the screen with the notify function. The statistics appear when the compute button is pressed. An example is shown below:

